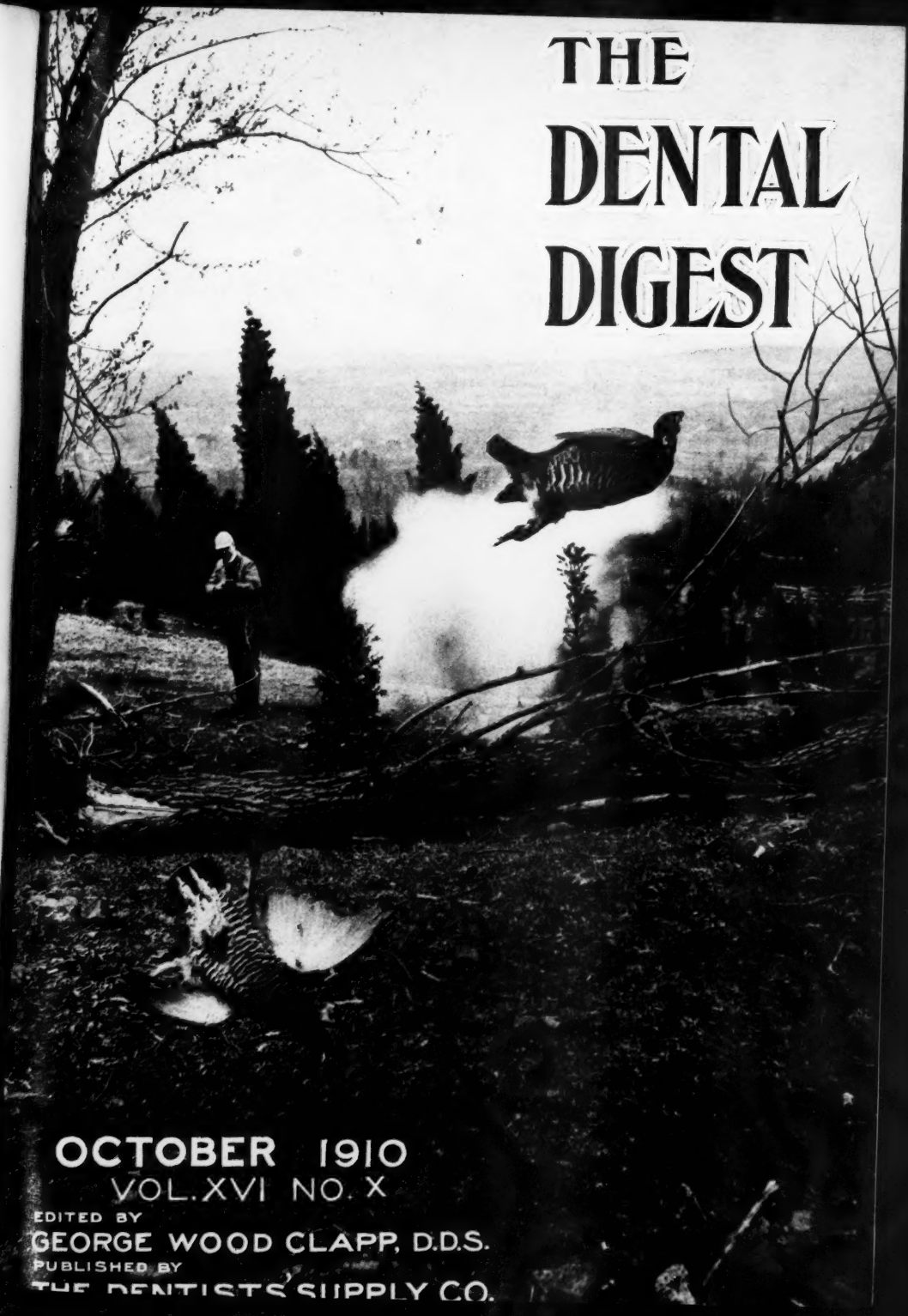

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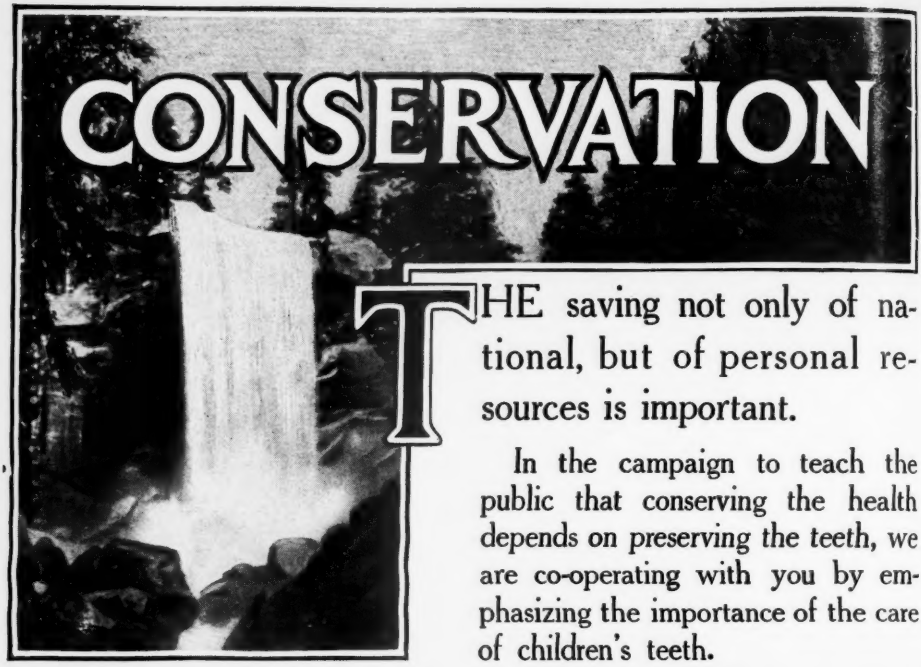

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THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., Editor

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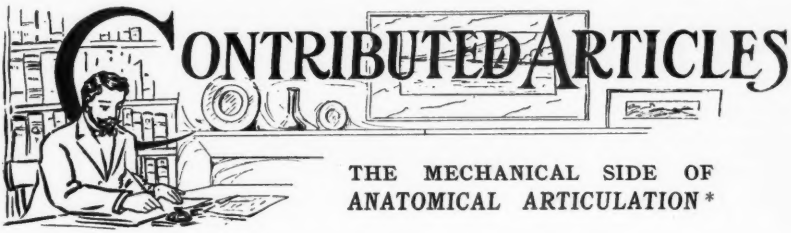


THE MECHANICAL SIDE OF ANATOMICAL ARTICULATION*

BY GEORGE WOOD CLAPP, D.D.S., NEW YORK

(Ninth Article)

Synopsis of previous articles:—The visible characteristics of anatomical articulation in natural dentures have been outlined as well as those features of it which may be reproduced in artificial dentures. The successive steps in proper bite-making have been considered. The "occlusal plane" of the bites has been determined; the bites have been built to correct heights and fulness and have been marked for the sizes of the teeth. The teeth indicated for the case have been selected and laid aside till the time for their setting. By means of the Face Bow the models have been mounted on the articulator so as to reproduce any peculiarities the case may exhibit. The bites have been replaced in the mouth, the protruded bite taken, and the bites, properly fastened together, removed from the mouth. The wax bites, with the lower in the protruded position, have been removed from the mouth, placed on the articulator, and the condyle slots adjusted to the proper slants. The compensating and lateral curves have been worked out in the wax bites and all is ready for the setting of the teeth.

ARTICULATING THE TEETH

WHEN the compensating and lateral curves have been worked out in the wax bites, the matter of correctly articulating the teeth becomes very simple, provided proper moulds of teeth are used. The ridge on

* *These articles are now being published in book form as a premium to be given* THE DENTAL DIGEST *subscribers for* 1911.

one-half of the upper trial plates is cut away, beginning at the median line. The upper central on that side is first set, bringing its incisal edge in contact with the incisal margin of the lower wax. If the teeth have been selected by the method outlined in an earlier paper, it will doubtless be found that this tooth will go to place without grinding. The rest of the half set are then placed in position, in orderly sequence.

In the setting of the bicuspids and molars, it will make a great difference to the worker what moulds of teeth are used. The bicuspids and molars, to the use of which dentists have until lately been confined, are not adapted for anatomical articulation, or indeed to successful articulation in any form. The writer does not know how lifelike were the originals from which these have descended, but certainly these now bear no noticeable resemblance to natural teeth. The relative heights of the buccal and lingual cusps are far from correct, and the cusp formation in general is not such as to elicit the praise of close observers.

Nor is it practicable for the dentist to so grind these teeth that proper articulation shall result. The proper articulation of 28 teeth requires an accuracy in proportion and in cusp and sulci formation, which can hardly be accomplished by grinding. And even though it could, few dentists have the training, the patience or the time for it. Dentists who desire to undertake this labor of grinding are referred to the writings of Dr. George H. Wilson of Cleveland, O., who is very expert in this line. As, however, Dr. Wilson spends several hours per denture in securing these results, and as all of these results with others can be obtained by the use of anatomical moulds in bicuspids and molars, it is assumed that the dentist prefers to use these.

Since the introduction of the anatomical bicuspids and molars, practically all of this grinding has become unnecessary. And results which no grinding is likely to parallel are attained almost without labor.

The anatomical bicuspids and molars are reproductions of the best forms of natural teeth at the period of middle life. The mesio-distal and bucco-lingual proportions of the natural teeth remain unchanged. The buccal surfaces are as in the natural teeth, save that the buccal markings in the molars are accentuated.

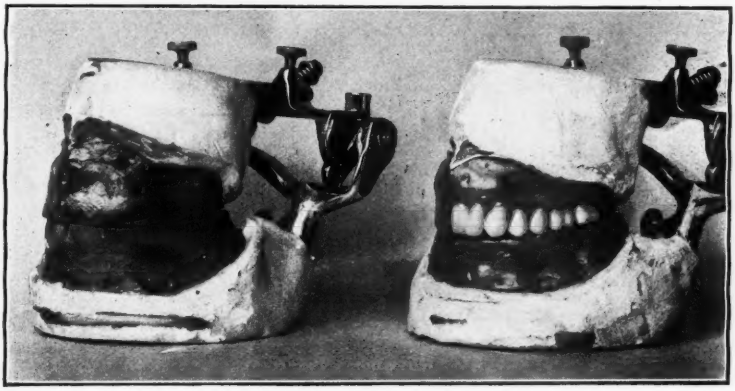
The occlusal surfaces are changed from the natural forms only so far as is required by the use of two molars on artificial dentures, in place of three in the natural denture. The cusps show the wear common to natural teeth in middle life and are lowered thereby from their greater height in youth. This shortening of the cusps by wear is a very common occurrence in the natural teeth. The shortened cusps materially assist the dentist in securing articulation and reduce the danger of the dentures being dislodged. Deep cusps on artificial bicuspids and

molars add nothing to the effectiveness of the teeth and prove sources of annoyance to the patient.

The upper and lower teeth in the anatomical moulds are carved to articulation, one with the other. When opposed, they take their places with a definiteness that cannot fail to please one accustomed to the uncertain articulation of the forms in common use.

These anatomical moulds may now be had in four sizes, a small, a small medium with rather small upper molars, a medium, and a large. A small mould is nearly completed.

While the artistic suitability of given moulds is an important consideration in the selection of anterior teeth for any case, the bicuspids



ILL. 45.—On the left: wax bites, curves worked out, ready for setting teeth. On the right: half of upper ridge cut away and teeth set.

and molars may be selected with less reference to art. In these teeth, the questions of size, proportions and articulation are most important. The bicuspids and molars must not be too large to go well to place. They must be properly proportioned in all their dimensions; and they should articulate with the opposing teeth as perfectly as may be.

Practically all the requirements of actual plate work may be met by the use of a few properly graded sizes of bicuspids and molars. And the anatomical moulds as thus offered, carded with anteriors of suitable sizes, meet very well indeed the practical demands of denture making.

Moreover, these bicuspids and molars are shaped, on the ridgelap, like half saddle back moulds. This makes them relatively shallow. For very close bite cases, where little vertical space can be had between the ridges, the pins may be bent upward against the porcelain, yielding a very shallow form of tooth.

When the upper teeth on the one side now "in work" have been

set so that the occlusal surfaces rest against the occlusal surface of the lower trial plates, they should be waxed firmly in position in order that they may serve as guides for the movements of the models in setting the teeth on the other side.

During the setting of the upper teeth, the articulator should be used as a plain hinge articulator and the teeth should be set so that all cusps lie in contact with the wax of the lower trial plate.

The other half of the ridge of the upper trial plate is now removed and the balance of the upper set, beginning with the centrals, is set in like manner as the first half.

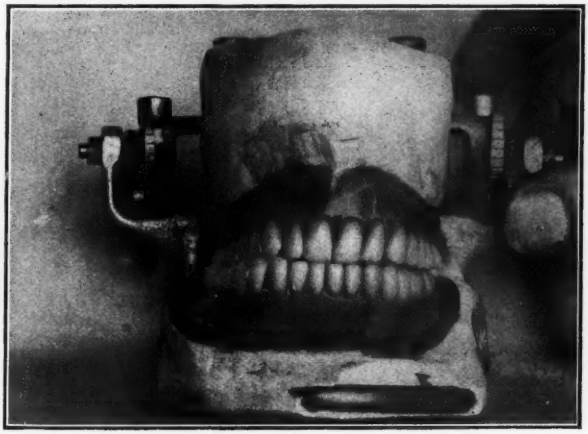
Having now set the upper teeth so that they occlude properly with

ILL. 46.—On the right: upper set all in place; half of lower ridge cut away and lower teeth partly set. On the left: both sets set; both plates vulcanized and remounted on articulator for grinding.

the lower wax, their positions with reference to articulation may be tested. Move the upper model laterally about one-eighth inch from the position of central occlusion, and observe the relations of the buccal and lingual cusps to the occlusal surface of the lower trial plate. On the side toward which the upper model is moved, the lingual cusps should be evenly in contact with the lower wax. The buccal cusps on the opposing sides should be in contact with the lower wax, as should the lingual cusps if the movement has not carried them lingually off that trial plate. When the relations of the teeth are satisfactory in this position, the upper model should be moved to the other side and correct relations between teeth and bites established. When the proper relations are assured and the teeth are waxed firmly in position, half of the ridge of the lower trial plate is cut away, preparatory to the setting of the lower teeth.

As the first molar is the most anterior lower tooth which has two

lingual cusps, it is suggested that this tooth be set first. With the anatomical moulds used in these illustrations, the articulation between uppers and lowers is so exact that the lower first molar goes to a definite place and lodges there. It should be waxed in position The lower second molar should then be placed in position on the wax and the lower second bicuspid and first bicuspid set. These having been firmly waxed in their proper positions, the other half of the lower ridge is cut out and the same teeth on the opposite side set in the same order and waxed in position. It now remains only for the dentist to set the lower anteriors in position and in such artistic arrangement as he prefers.



ILL. 47.—Anatomical articulation in lateral excursion of the mandible. Note form of contact on both sides.

The articulation between uppers and lowers should be made as exact as possible without grinding the teeth. Because of the correctness of shape of the occlusal surfaces and the time-saving method of grinding to be outlined later, it will be found unwise to spend time in grinding the occlusal surfaces of the teeth in the ordinary manner.

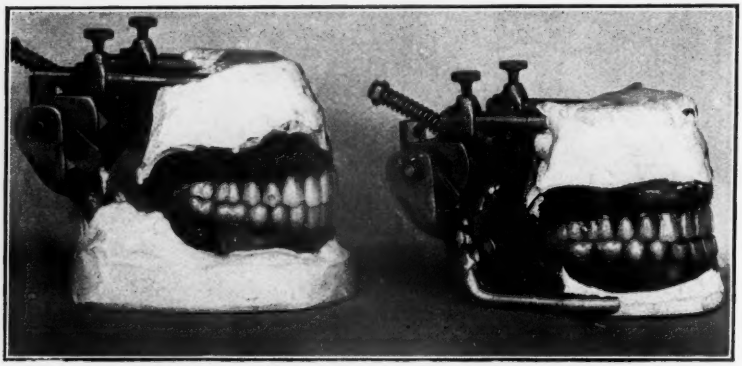
It will doubtless be well to try the teeth in the mouth and have the patient make the usual masticatory movements. If the foregoing steps have been rightly carried out, few changes will be found necessary.

PERFECTING THE ARTICULATION

It will be noticed that no grinding has so far been done to adapt the teeth to position and the time and labor saved by this omission will be very noticeable. The following method for perfecting the articulation is suggested:—

When the dentures are seen to be satisfactory, the upper, together

with its model, is removed from the articulator and vulcanized in the usual way. This leaves the lower model, with the teeth in position, on the articulator. When the upper plate has been vulcanized, it is very carefully articulated with the lower, and while so articulated is filled with plaster and again attached to the upper model bow. The lower model and plate are removed and the plate vulcanized in the usual manner. It then is carefully articulated with the upper which is now in its former position on the articulator, and attached to the lower model bow in the same way. A thick paste made of carborundum powder and oil is smeared over the occlusal and incisal surfaces of the teeth and both sets are firmly rubbed together through every biting and grinding



ILL. 48.—On the right: dentures set with flat occlusal planes for a patient having a condyle path inclined 50° x. On the left: dentures anatomically articulated for the case.

motion permitted by the slant of the condyle slots, which remains unchanged. With the moulds of teeth here suggested the only points which will need grinding are those which may have received undue elevation by the manner of setting or by slight variations in the flow of the porcelain during baking.

The following advantages are gained by this method of grinding:—

The articulation is made much more perfect than by the usual method. This form of grinding takes down the little contact points which prevent very close adaptation. Many of these little points would be difficult of location for reduction with a stone.

The grinding is done more rapidly than in the usual way. From fifteen to thirty minutes completes the grinding.

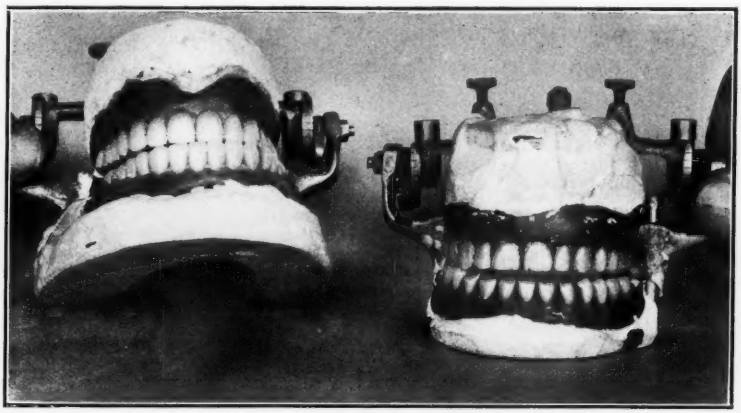
The surfaces of the teeth are altered to only the necessary extent. These moulds require no general alterations to permit close articulation.

The glaze is removed from the occlusal surfaces of the bicuspids and molars, thereby facilitating the retention and crushing of food.

The anterior teeth are automatically "aged" in just the manner suitable to the case.

The adaptation of the upper and lower dentures, when this grinding is complete, will naturally be affected by the amount of experience and care of the worker, but after a few dentures have been made by these methods, the following adaptations should be present.

When the upper jaw is moved laterally so as to bring the buccal surfaces of the upper and lower teeth on one side into the same vertical plane, there should be contact of all the upper and lower teeth on that side from the centrals or laterals backward. The interdigitation of the



ILL. 49.—Same dentures as shown in previous illustration. Here thrown into lateral occlusion. The one on the left is tilted to show balancing contact of right molars. Notice separation between left molars in dentures on right hand.

buccal cusps should be nearly exact and that of the lingual cusps should be sufficiently close for all practical purposes. At the same time the teeth on the opposite side of the upper denture, that is on the side not engaged in crushing, should be in contact with the lower teeth on that side, from the upper first bicuspid back. In other words, it is possible to so set the dentures that only three teeth in the upper denture will be out of contact while the dentures are in this relation. These teeth are the central, lateral and cuspid of the side not engaged in crushing.

The adaptation in the incising bite is as follows. If by even pressure on both condyle slots the upper model be carried backward until the upper incisors are in the end-to-end bite with the lower incisors, there should be a contact between each upper tooth and its opposing lower.

The upper cuspids will be in contact with the lower first bicuspid; the upper first bicuspid with the lower second bicuspid; the upper sec-

ond bicuspid with the mesial cusp of the lower first molar; the upper first molar in contact with the lower first and second molars and the upper second molar in contact with the lower second molar. The result will be be that during the incising bite, when the incisors come together in the end-to-end contact, the upper denture will be supported throughout its entire length on both sides by lower teeth. In the final incising bite, when the lower incisors pass upward and inward along the upper incisors, the buccal cusps of each bicuspid and molar will slide down the appropriate inclined plane of the lower tooth.

WHAT ARE THE RESULTS OF THESE STEPS AND ARE THEY WORTH THE TROUBLE INVOLVED?

It is difficult to compare these results with those from plate work done in a haphazard manner, because there is no comparison in the value of the service rendered to the patient. In the ordinary form of plate work, any real crushing or chewing ability which the patient may have is largely a matter of accident. With the method here outlined, certainty replaces guesswork at nearly every step, and in at least a very large proportion of cases satisfactory results are assured.

Patients for whom dentures articulated in the ordinary manner have been removed and anatomically articulated dentures furnished, have been given so much greater grinding power and such greatly increased satisfaction that one can say only that the average results from this form of work are such as could not be attained in the ordinary way. What is quite as much to the point is that patients for whom dentures of this sort have been made, willingly pay the increased fee.

The additional time consumed is not as great as would at first appear. It is probable that for the average dentist the time required for making an upper and lower denture will not be increased more than 3 or 4 hours, when enough have been made by this method to familiarize him with the technic. Rapid workmen will greatly reduce this estimate.

THE MAKING OF PARTIAL DENTURES

It is quite a common experience for dentists to be confronted with the problem of making partial dentures, involving the bicuspid and molar teeth. In such cases, as indeed in all other partial dentures, the service which the dentist renders to his patient can be materially increased by making models of both jaws, mounting them on the articulator precisely as for full plates, working out the condyle paths as suggested in the making of bridges and the building of a partial bite which will show the compensating and lateral curves. Of course in such

cases the dentist will use the natural teeth opposing the bite as the other denture, and he will be somewhat limited by any unusual positions which these teeth may have taken. But allowing for such limitations, the stability and usefulness of the partial denture may be greatly increased by this method and by so articulating the artificial teeth with the natural teeth that the ordinary masticatory movements are provided for.

Dentists are often confronted with the request to make one denture to articulate with another already in place. It is unlikely that the denture in place is constructed for anatomical articulation; and it will be found nearly or quite impossible to anatomically articulate another denture with it.

Under such conditions the dentist is fully justified in persuading the patient to permit him to make a new denture to replace the one in use. By use of the new moulds of teeth and the method here outlined he can then anatomically articulate both.

The greatly improved service which he can render with the correspondingly improved benefits to the patient are ample warrant for such persuasion.

(Concluded in November issue.)

Precaution to be Observed in the Application of Arsenious Acid.—In no case should arsenious acid ever be applied to an exposed dental pulp without first applying the rubber dam. Should the walls of the tooth requiring arsenical treatment be so broken down as to preclude the application of the rubber dam, without absolute dryness, cover the exposed pulp with a hollow metal cap, with a minute dressing of cotton and eugenol, intervening between exposure and cap, restoring broken walls with cement. If pain has been of recent origin, say two or three days, or is present at the time of operation, I invariably allow tooth to rest for a week before making arsenical application, that pulp congestion may at least partially subside, which it usually does when the above details are carefully carried out, the résumé of which reads,—a soothing dressing, absence of pressure, hermetic sealing, eliminating irritation from saliva and impacted decomposing foodstuffs.—Elliott R. Carpentar, Chicago.—*The Dental Review.*

IMPORTANCE OF ORAL HYGIENE*

W. G. Ebersole, M.D., D.D.S., Cleveland, Ohio

Former President Theodore Roosevelt stated that "the health of our citizens is the greatest asset of the Nation," and in recognition of this fact, President Taft has called for the formation of a National Health Bureau.

We have said that the discovery of micro-organic life and the turning of the attention of professional men in this direction has been of great value. As proof of this, we will say that the death rate by typhoid fever, a communicable disease, the conquering of which is largely a question of sanitation, has been reduced 50 per cent. in the United States since 1880, and still 22,000 die annually from this malady.

The diphtheria rate has been reduced 80 per cent., but still there are 20,000 lives lost annually from this malady.

Most of this reduction has resulted from the knowledge obtained in the study of bacteriology and sanitation, with little or no thought directed toward the oral cavity, the greatest harbinger of pathogenic micro-organic life and the portal through which most of these germs enter the human system.

But, notwithstanding these statistics, we are told that every hour seventy-two Americans die from preventable diseases. Each day lives are needlessly destroyed which equal a population of a town of almost 2,000. Every year the sacrifice of life, through ignorance and neglect, equals the population of a city larger than Baltimore or St. Louis.

My authority for this statement is Professor Irving Fisher, of Yale University, and is taken from his recent report to the National Conservation Commission, of which he is a member.

Just think of a great city, larger than Cleveland, being wiped out in a single year by diseases which may and can be prevented! And it is to help prevent such a condition as this that we have asked you to meet with us to discuss the care and use of that organ which will wield the greatest influence in correcting these faulty conditions.

The profession of which I have the honor to be a member has proven that the neglected oral cavity, the ill-kept mouth, is one of the best breeding places for pathogenic micro-organic life or disease-producing germs, and the Association, which it is my privilege to represent

* Read at Meeting of National Campaign on Oral Hygiene, at Cleveland, March 18th, 1910.

upon this occasion, with the co-operation of the Cleveland Dental Society, has obtained proof that 97 per cent. of the children in our Public Schools have diseased or faulty mouths.

If 97 per cent. of our little ones have mouths that are diseased, what must be the condition of the adult population of this country.

Just think of our boys and girls, our babies, our loved ones, no matter how much care and attention we have given them at home, being placed in an institution where it has been shown beyond any question that practically 97 per cent. of the inmates are abnormal or diseased.

What a "Hue and Cry" would be raised if parents were to deliberately send their children into a house containing patients ill with scarlet fever, or a building filled with patients affected with measles; or, imagine, if you will, parents sending their little ones to live for a certain number of hours each day in an institution containing patients who were ill with pneumonia, typhoid fever or tuberculosis.

What a furor would be made and how active the Health Authorities would become under these circumstances, and yet, think of the State and Nation requiring these same parents to send their children for five hours a day to be confined in an institution wherein 97 per cent. of the inmates are found to be diseased and the mouths containing the micro-organisms which produce pneumonia, and the micro-organisms which produce tuberculosis, together with innumerable other pathogenic organisms.

Thus far I have spoken of the mouth as a whole. Just a word about the influence of the teeth upon disease. Dr. Henry Upson, of this city, has proven that many cases of insanity are due to the faulty conditions of the teeth. It required considerable experimenting and much time to be able to obtain definite proof of this fact, and yet, every up-to-date dentist knew this and has known it for years.

. . . . . .

I want to go a step farther and state that faulty teeth exert an equally detrimental influence on every other organ of the body. Thousands of so called cases of stomach, intestinal, liver, kidney and heart troubles are due to the faulty use and care of the mouth and teeth; and all the medicine and *medical treatment in Christendom cannot cure them.*

They must use and care for their mouths and teeth properly if they expect to recover their good health.

Why, do you know that the great Match Manufacturing Trust has employed a dentist for years, whose duty it is to visit the factories so many times a year and examine the employees? If faulty conditions of the mouth or teeth are found the employee is instructed to have this

condition corrected, and if it is not done within a reasonable time the individual is dismissed from the service.

Before this system was established, many people not only lost their teeth, but in a number of cases workmen lost their jaws as well, and even death ensued *from poison which passed in through decayed teeth.*

Since the establishment of this system of examination and compulsory care and treatment, *phosphorus necrosis* or death of the bone has been practically unknown to match workers.

A fact which I wish to particularly impress upon this audience is that *caries, or decay of the teeth, is the most prevalent disease of civilization.*

Every father and mother knows how readily the germs of scarlet fever or diphtheria are communicated from child to child, and I want to say to this intelligent audience *that the micro-organisms which produce decay of the teeth are just as readily transferable from child to child and from adult to adult, as other germs, and are wielding greater havoc in the human family than all the other disease germs put together;* and it is for the purpose of proving this very fact to the public at large that we are inaugurating this great educational campaign.

There are thousands of invalids who are such because of faulty oral conditions.

Some one may ask the question, "If these things exist why have we not known it before?"

My only answer is that it is because both the medical and dental professions have failed to perform their full duty toward mankind.

Some of the more progressive members of the dental profession have made numerous attempts to have the various State Legislatures pass laws granting the Boards of Education, throughout the country, the power to permit or establish examinations and lectures from an Oral Hygiene standpoint, and to install clinics to take care of the indigent poor.

The facts which have been presented to you to-night have been furnished our law-makers; but, almost without a single exception a deaf ear has been turned to this plea.

The excuse has been that other matters of far greater importance demanded the attention of the various Legislatures. *Just think of such a condition!* The members of our Legislatures too *busy* to look after the health and comfort of our boys and girls; and think, too, they control the laws which compel our children to attend these schools wherein are found such unhealthy conditions.

The great trouble has been that there was no definite proof of these statements at the command of the profession, and while these facts are

known, and have been known for years to the profession, they lacked convincing proof and the law-makers have not been inclined to accept their statements.

In other words, it is an absolute impossibility to secure laws to handle and control the conditions which confront us *without first educating the public to their needs,* and through them reach the "*Powers that be.*"

The Public and the Law-makers of this country must be made to realize conditions as they exist.

They must see that with which we have to contend; and it is for this purpose that the present Educational Campaign has been undertaken.

This meeting to-night and other meetings of a similar nature which will be held throughout the United States, are cries for help on the part of the profession in seeking to prevent this great disease of the people from destroying the health, vigor and happiness of the human family.

Without the aid of the public at large in combating this common foe, preventable diseases will continue to sap the life and strength of our Nation.

Our cry for help is not alone to care for conditions which actually exist; but, *the great appeal in which we raise our voices at the present time is for aid in the prevention of this condition.*

Methinks I hear some one ask, "Why is it that this condition exists?" My friend, it is a long story, and one upon which I might talk by the hour. Briefly stated, it is our method of living, the kind of food we eat. I beg pardon, did I say eat? *I should have said "bolt" for the American people are a race of food bolters. We do not eat, we have lost the art. We simply shovel food into our stomachs* as a fireman shovels coal into the furnace, and give it about as much thought and attention while it passes through the mouth.

Thus far, I have spoken of the use and care of the mouth.

The great mission before us to-day is to teach the correct USE of the mouth. With Humanity using the mouth as God intended it should be used, care and treatement would sink into comparative insignificance and many of the ills and ails of the public would be practically forgotten.

To-day we have almost forgotten the importance the mouth bears to life, and as a result we are reaping the reward in the loss of health, strength and beauty.

The fact is that the condition exists and is gradually growing worse in spite of all that has been done by both the dental and the medical professions.

The question before us to-night is not so much what causes it as how to prevent it. True, we are interested in the cause in so far as it aids us in preventing this condition.

It is to combat this condition that we are waging our war.

Our campaign embraces the three great educational mediums of the American republic: the public school, the public press, and the public platform.

In the Public Schools we are installing a system of examination, which brings the attention of every parent to the faulty condition of their children's mouths.

This work is being done in the city of Cleveland by members of The Cleveland Dental Society. Lectures are to be given in the school buildings by a corps of twenty men of the Cleveland Dental Society, explaining to parents, teachers and pupils how to overcome the faulty conditions and to prevent recurrence.

Six clinics have been established; four in connection with the public schools and two in connection with the parochial schools, to be used in educating the public at large as to the value of proper oral conditions.

Arrangements have been made with the Educational Department of the Public Schools for a complete record of the child's working efficiency, both before and after treatment.

The newspapers of the country have been brought into the fold and made aware of the appalling conditions, and have united their forces with the profession to secure the correction of same.

Such meetings as we are holding to-night will be held all over the country in order that the message may be brought to humanity as a whole.

Every father, mother and teacher must unite with these great forces to secure conditions which will prove a protection to our boys and girls, and not a menace.

Nothing can possibly be of more value to a nation than the lives of those who compose it. To use every possible means to prevent destruction of these lives is not only a proper function of the government, but a most solemn duty of government.

But, in the great rush to aid or control great corporations, the government has almost forgotten its duty to the masses, and it is up to the people to teach it that there is something of greater importance than dollars and their control. Government must be made to perform its full duty.

Our law-makers have recognized this duty only to a limited extent.

They have provided Health Boards or Bureaus—local—and national —to assist in protecting human life against one class of preventable diseases, and that is those that may be communicated; but, as already indicated, the deaths that have been prevented are but a fraction of the enormous number occurring annually from some of these same communicable diseases.

We are told that public health measures and the general war against disease are supposed to be more effectively and actively prosecuted in greater New York than in any other American city.

The cost of governing that city last year was $148,447,000.00, and all that was spent in the health department was 1 1/16 per cent. of that amount; and yet during that year the city lost 33,200 lives from ordinary preventable diseases.

We are also told that in 148 cities of the United States, during the year of 1907, the ratio of health department expense to the total government expense was 1 8/10 per cent. The ratio expended for police and fire departments of these same cities was 23 per cent. From this may be obtained an idea of the slight importance placed upon the conservation of human life by the government of our large cities.

In Greater New York $8,000,000.00 was spent on the fire department, and the fire loss was $9,400,000.00. For the Public Health Department $2,418,499.00 were spent, while the value of life lost from preventable diseases, using Professor Fisher's estimate of $1,700.00 as the producing value, was $56,550,000.00.

Just think of spending eight millions of dollars to protect property against fire, and only spending two and one-half million dollars to protect the lives of human beings when the loss from preventable diseases alone has been estimated at fifty-six and one-half million dollars. Is it not high time that such men as former President Roosevelt, President Taft, and others call our attention to the necessity of greater activity in this direction?

No department should show greater activity and energy than the Health Department, which should be organized on scientific lines, presided over by broad-minded, scientific men, and provided with a publicity bureau, and a large and efficient corps of medical and dental examiners and inspectors; and their work should be conducted on a scale consistent with the amount of life waste they are to combat.

But, life waste in the United States amounts to a billion and a half annually in dollars alone; the estimated producing value of the lives unnecessarily destroyed.

Figuring a population of 80,000,000 inhabitants, this means a loss

annually of $18.75 for every man, woman and child in the land. Almost two-thirds as much as it costs per year to educate a child in our public schools.

This is a tremendous loss and must be stopped; but this is only the loss which occurs through death. We have said nothing about the loss in *working efficiency* from those who are attacked by the *various preventable diseases* and *recover from the same.*

If to the loss by actual death we add the loss in producing power of those who recover from the various preventable diseases, we would more than treble this amount, making the actual loss in the United States practically five billion of dollars, from diseases which might be prevented.

This is an astounding statement, and a condition which should merit the closest attention on the part of every inhabitant of this great and glorious country of ours.

A stop must be put to this tremendous waste, but how? The men at the head of this Great Campaign believe that the correct use (mark you, I said the "correct" use) and care of the mouth will wield the greatest influence for good in this direction.

In the campaign we are launching, we are asking you to join us with a view to materially increasing the vigor and working efficiency of the pupils in our public schools; to help sustain the health and happiness of the American home; and to restore the strength, comfort and beauty of the Nation.

We must stop the mad rush for dollars by the American people long enough to turn attention to the preservation of the life and health of the Nation.

We have in this country the greatest educational institution of the world. I refer to the Public School System. In the past the greater portion of the effort of this organization has been devoted to the training and development of the mind, and so persistent have been our efforts in this direction that we have a race strong in mind but weak in body.

The final appeal I wish to make to this audience and to the public at large is for aid in making this great educational institution one which gives as much thought and consideration to the physical being as it gives to the mental, and thus bring back to our Maker man as he was given to us.

Let us use every force within our power that will aid in making our Public Schools an institution which will produce men both strong in *body* and *mind;* and let us stand shoulder to shoulder fighting for the life and health of mankind until we have health protection in this *Land* of ours which equals at least that given to property.

Let us have a National Health Bureau, organized and governed in a manner which will tend to give back to Nature man as God created him.

Let us do these things in the interest of our schools, our homes, and our Nation; and to the glory of God and of mankind.

It is God's will, can we not do it in His Name?

OXIDE OF ZINC AND OIL OF CLOVES

By E. S. Ulsaver, D.D.S., New Rochelle, N. Y.

Since the writings of Dr. Herbert L. Wheeler brought out the excellence of this formula it has assumed an important place in the requirements of my practice.

For sensitive cavities, where for some reason it is unwise to attempt to remove all the decay, it makes a nearly ideal temporary filling. It can be mixed very thick and "patted" into a cavity. After it has been mixed thick on the slab, it is well to pat it with the spatula, which brings the oil to the top, just as the water comes to the top when porcelain is manipulated in this way. This patting into the cavity makes the use of pressure unnecessary.

In children's teeth, where the pulps are exposed, it is of great value. Here it should be mixed a little thinner, and when put into the cavity it should be "patted" in, to avoid causing pressure on the pulp.

In the teeth of adults, where it is not desirable to cut away the dentine for any other filling, it can be made to give excellent service for a long time.

As a seal for a cavity, in the same way that Sandarac varnish was formerly used, the paste should be mixed about as thick as cement is mixed for setting crowns. A pledget of cotton is saturated in the mix and placed in the cavity. Here it may remain for months, if necessary.

In all these applications the saliva should be allowed to flow over the cavity as soon as the mix is in place. This seems to be necessary to the proper hardening of the material.

A little boy has just left for whom, several months ago, the entire lingual side of a molar was removed. A filling could not be made at the time, so a thick mix of Oil of Cloves and Oxide of Zinc was put into the cavity. To-day it seems as hard as cement.

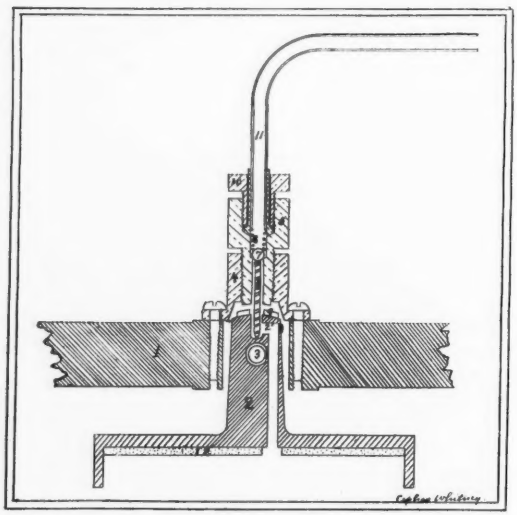
The druggist supplies me with an excellent oxide of zinc at very low cost.

SIMPLE, COMPRESSED-AIR CASTING MACHINE

By Cephas Whitney, D.D.S., of Georgetown, Demerara, B.G., S. A.

The apparatus is shown in the sectional illustration, as attached to an altered Solbrig press; but a metal arm 1 of about 1 inch in diameter may be mounted in any desirable manner, to any convenient standard, and the cast iron lid 2 can be bought, without canal 2 feet, from any depot handling Solbrig's appliances, or a wooden pattern can be made and cast in iron or brass.

The author's excuse for publishing it is because it may interest those who dabble in mechanics, or wish to have a low-priced machine



made by a local mechanic, and who also prefer to use for casting a gas pressure instead of using the usual simpler though varying pressure of steam from wet asbestos. The advantage of the stored gas pressure is that its compression is selective and constant.

1 is a portion of the swinging lever arm. 2 is the lid, which makes the sudden joint over the cylinder with moulded-work (cylinder not shown). Cylinders of any size may be used with the single lid. The hole in a Solbrig lid must be filed oval longitudinally, at pin 3, to procure a vertical movement between 2 and 3. Canal 2 feet is drilled from each end of lid as shown, and then connected by drilling horizon-

tally from the position where plug is shown near 2 feet. Plug is afterwards soldered in. 3 is the pin upon which lid 2 pivots. The relative position of 2 and 3 are shown incorrectly. The pin 3 should be shown touching the top of the hole in lid 2, all the space should be illustrated below 3 and none above, and this space should be slightly more than is shown between leather joint 9 and lower end of brass attachment 5.

4 is turned up, bored and chased from brass, as shown in your lathe, if you have one. 5 and 10 are brass fitting and cone union, which may be purchased from the Mietz and Weiss Oil Engine Firm, 128 Mott Street, New York City, who use them on their engines for copper tube connections which leads the oil from the fuel pump to the injection nozzle. 6 is an old dental engine bur with the ends cut off. 8 is an easily made spiral spring, made in the usual way from hard drawn brass wire. 7 is a hardened steel bicycle ball. 9 is a leather joint washer. 11 is made from ¼ inch o. d. copper seamless tubing, and then bent and soldered to cone sleeve fitting in cone union 10. 12 is an asbestos joint with a hole through to pass air, on closing lid 2 over cylinder-mould, not shown. Two screws hold the brass fitting 4 to lever-arm 1 rigidly.

The press operates as follows:

When the arm 1 is suddenly brought down towards the molten metal, and the mould-cylinder (not shown) makes a tight joint at asbestos 12, the arm 1, with its pin, continues to move downward because of space in lid 2 under pin 3. Pin 3 now goes out of operation, the place of contact between arm 1 and lid 2 being transferred to joint 9 on top of lid 2.

As the lid 2, punch 6 and ball 7 become now stationary, this downward movement of arm 1 causes the seat in 5, for ball 7, to become opened downwards, the spring 8 being compressed. The air from air tank, which is connected by pressure hose to tube 11, now escapes under the ball 7 down through the canal 2 feet on top of the molten metal in the crucible-mould. The air cannot leak at 9, because the movement mentioned causes the leather joint 9 to impinge on lower end of 5, thus sealing that aperture. Joint 9 receives the whole strain of your strong left arm. All the movements take place practically together.

Neutralize Silver Nitrate Stains.—Neutralize fresh stains of silver nitrate with solution of sodium chloride.—Carl M. Cahill, Chicago.—*The Dental Review.*

A BROADER FIELD

By C. E. Fellman, D.D.S., Sutton, Nebraska

Those dentists who in the past have commanded a large patronage have in nearly all cases been able to do one or more things better than others. It cannot be questioned that some men of meagre equipment have been able to attract a large number of clients. It is interesting to observe the methods which they have followed. Some have located in communities where large numbers of relatives or acquaintances lived. Others have joined lodges and used other means of "becoming acquainted." But most men who follow dentistry would rather build up a practice upon lines more satisfactory—or not build one up at all. Many of us will have to admit that our face is not our fortune and any work that may come to us in the future will be the result of good work done in the past. The man who can impress upon the minds of those with whom he may come into contact that he is well posted along the line of his work, and that he has an interest in humanity, will have smooth sailing as far as getting the work to do is concerned. The problem is how to do the work well rather than how to get it to do.

The public expects a dentist to be considerable of a scientist. The dentist, on the other hand, is anxious to do his work with neatness and dispatch; to do work that will endure and would be a credit to the hand of a great artisan. Yet if many of us had a better grasp of the situation from a theoretical standpoint, the patient would have more confidence in us. Whenever a tooth is extracted, or cocaine injected into the gum, or a broach inserted into a root canal, it cannot be questioned that there is a risk taken. It is remarkable how soon the public finds out what a man's gauge is.

The amount of a man's patronage and the sort of individuals who compose it will, as a rule, bear a direct ratio to his mechanical dexterity and acquaintance with dental literature. Good clothes, location, manners, and furnishings are helps, but only helps. The class of patients that it is most satisfactory to work for are the strangers whom you have never seen before and who have been recommended to you by some one whom you have served. That recommendation was given for the patients' good, not yours.

If this is true, it would seem that the scriptural injunction, "Knowledge is the principal thing, therefore get knowledge" would apply. But there are few practitioners who would enter upon a course of study with a financial motive. There are men who have become famous by study and investigation while carrying on a dental practice.

But not one in a hundred has the ambition and physical strength to do any considerable amount of study while bearing the burdens of even a small practice. What we learn from preceptors will be our stock in trade until the end. By reading journals and attending conventions many valuable suggestions can be obtained. But with the average dentist there is no launching out into unexplored fields. If the student period could be broadened, deepened, and lengthened, inestimable good would come to the profession and public. In order to obtain a right to practise a man must be able to do a certain number of things. He must be able to clean a set of teeth, extract a tooth, insert a filling, construct a crown, bridge, and a vulcanite denture. How much better it would be if every man were also required to have a working knowledge of orthodontia, porcelain work, the treatment of pyorrhea, the making of metal plates, anesthesia, minor surgery, and some ideas of the effect of dental disorders upon the general health.

There is no doubt but that in the near future dental education will be placed upon a more satisfactory basis. Anything which is exploited as a purely commercial venture is bound to carry with it an air of cheapness and superficiality. In some of the states at least where the state universities have established dental departments the results have been satisfactory. It would not be at all surprising if in the next decade the last commercial dental college would become a matter of history.

These remarks are not intended to carry any pessimistic tone. Those who desire may improve their technique and resources as long as they try. New apparatus can and should be installed from time to time and an effort made to keep at the head of the procession. Those who are interested in Business Building are serving their first year or two as dentists and it is to them that these thoughts are respectfully presented for consideration. The power which comes as a result of persisting effort is surprising. Difficulties vanish before determination like ice before the July sun.

In dentistry the labor, though taxing, is light and the compensation fair. These very facts produce a sort of liberality which causes a man to spend his wages almost before they are earned. Very few have accumulated a fortune. Yet there are better things than wealth and worse ones than poverty. No one can stand prosperity. And if it causes an erstwhile good fellow to become a grouch and a churl it has cost too much. Yet we would all choose the money and risk losing anything in an ethical way.

All who would be looked upon as more than mere artisans will do more or less charitable work. In fact having a fixed price for any

piece of work is hardly a fair arrangement for either party. All great surgeons do an enormous amount of charity work. It should not be done as an advertisement, but because it is right. Incidentally the operator gains experience. The left hand should not know what the right doeth. Some work must be done for a third or fourth of what it is worth and a nominal fee charged for everything. This does not apply to those whose fees are ridiculously low.

WAS THIS A SECOND SIX-YEAR MOLAR?

By M. O. Pisor, D.D.S., Chicora, Pa.

O. B. R., age twenty-seven, presented himself with a fistulous opening one-half inch above the gingival margin of the gum on the right superior six-year molar.

Some ten years previous the second bicuspid had been extracted and the six-year molar tipped forward and stood at a forty-five degree angle, which left the inter-proximal space as large as the end of a pencil.

There was considerable pus and inflammation in the parts. I treated it with antiseptic solutions a few days, but had no improvements.

I then incised the parts, and found what I thought was necrosis. I called a physician in for consultation, and he was of the same opinion and advised scraping, which I did, and continued the antiseptic treatments, but with no improvement.

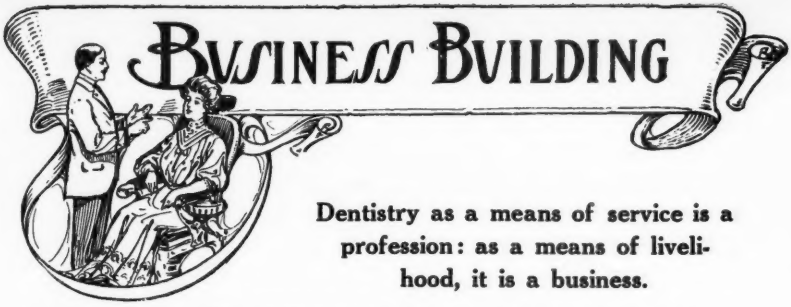
By this time the patient was experiencing considerable pain and the wound was bleeding a great deal, so I extracted the six-year molar.

The patient returned in two weeks with all pain, pus and inflammation gone, but complained of something growing in the cavity left after the extraction.

Upon examination I found a perfectly developed molar erupting. All other molars are in their proper places, and I cannot account for this one.

Has any brother ever had a case similar to this one?

Neglected children fill the poorhouse and almshouses in later years, becoming community liabilities. They make bad legislators or a bad public behind the legislature. This we cannot afford.—W. A. Evans, M.D., Chicago.



Dentistry as a means of service is a profession: as a means of livelihood, it is a business.

A VIEW OF THE BUSINESS SIDE OF DENTISTRY, AND A STATEMENT AS TO THE PROFESSIONAL OUTLOOK GENERALLY*

(*Continued from September Issue*)

By Dr. E. K. Blair, Waverly, Ill.

DISCUSSION

Dr. Lucien H. Arnold:

Mr. President and Fellow Laborers:

It is wonderful how much more can be gotten out of a paper written by a clever man, when one hears the author read it as beautifully as Dr. Blair has done, than can be gotten from the printed pages. It is a strong argument in favor of our Dental Societies.

I need not tell you how apropos is Dr. Blair's paper, for you have all heard it and that is enough.

I have given the comparative paucity of dental remuneration much thought and conclude that the reasons therefor are not deeply hidden.

I had hoped Dr. Blair would deal more directly with the details of getting one's just dues—details as to how the Doctor found the weak spots in the financial affairs of his office. I should have relished more explicitness in the matter of the Medical Fee bill he mentioned as having been so increased without public objection. These are important details we should know and consider to-night, for that is what the title of the paper suggests. It must be accepted at the very outset that the most important detail of earning money is to render one's very best services for it. That is a detail which is too often overlooked.

The Essayist says: "We are compelled by force of circumstances to give earnest heed to the practical business side of life, as well as to maintain continuous effort to keep pace with the *scientific* lines within our profession."

Note that his phraseology intimates that he considers the business side of his profession *un*scientific.

* Read before the Chicago Odontographic Society, February 15, 1910.

It is maintained by many mathematicians that the science of mathematics and its branches is the only true science. This may be extreme. It would appear that the *subject* does not determine whether or not the work is scientific.

Then why should we slight the matter of making a set of scientific records of our office finances, which is of such vital import to us, while we pursue with such care and accuracy the making of another set of records which, to say the least, is of no more vital consequence?

The Essayist avers that the compilation of dental records and the compilation of the financial records of a dental practice are "——— two lines of thought pointing in opposite directions."

It seems to me that they are parallel, require similar handling and are of similar importance in their own ways.

There are two things which have ever kept people from attaining the best results from their labors. I refer to lack of detailed knowledge and lack of courage of their convictions, and I will show how they affect us later.

I agree with the Essayist that we have been too busy with the science of dentistry to give enough heed to our accounting. And further, as he intimates, many of us were engaged in other pursuits, often not professional, and acquired therein ideas of meager compensation which have never been reconsidered as to their appropriateness when, later, the gentlemen entered the higher field of professional effort. Hence one reason why so many of us fail to receive just compensation for our services is because we have given the subject no thought. And consequently we lack detailed knowledge of our business—though not necessarily of our profession.

And again, sometimes one *does* keep financial records as well as professional records, and sees from his records just where and how he *is* underpaid, but he has been so long in practice that he has established a precedent in fees which he dare not try to increase for fear of losing even the little he has.

The reason we are poorly paid is because we are ignorant of the details of our business, or we lack the courage of our convictions to ask for what of right belongs to us, even after realizing that the emoluments *do* belong to us.

The figures the Doctor presents show that there is plenty of work and to spare and will be for a long time to come. And if we convince the public that they should visit the dentist as often as we know they should for their own good, there will be vastly more to do. But of what profit is that to us if we fail to receive better returns than we have in the past.

The manager of one of the supply houses expressed himself to me in a way that sank in. He said that it seemed to him that the one thing that the average dentist thought of was to keep himself at work. To keep on spending his time and his money and his *very life* in the service of others and to give no thought to the getting of the proper returns for his work that he and those dependent on him were entitled to. Was he not right?

No doubt some misguided individual to-night will say that we should not consider the question of fees, or that when our work is properly done the fees will come, or that it is improper here to consider the raising of our fees.

Let me say in answer to such arguments that they are all idle vaporizing—mere talk. Some of the greatest men in our profession, as we have recently been told, have given enough thought to the financial side of their work to be now protected against want. I have little patience with those who would carry the impression that it is beneath professional dignity to consider financial matters in a sufficiently serious light to prevent their becoming objects of charity when perchance they are incapacitated. The ethical aspect of business affairs was mentioned.

As I understand ethics it embraces absolute justice to all. Why is it not just as ethical to ask for and insist on receiving an honorable, fair *reward* for service rendered as it is to *render* that service?

Honorable exchange requires that *each* shall receive full value for what he contributes to the transaction. That is a scientific law of business.

And I maintain that it is just as ethical to see that one party gets what belongs to him as to see that the other is equally fairly cared for.

The Essayist foreshadows the increasing ability of the profession due to better college requirements and training. And I would add that just as fast as that increased ability is exhibited the public will approve proportionately better fees, provided, of course, that we have courage to ask for what belongs to us and insist on having it.

He seems to hint at a general understanding among dentists as to a minimum fee scale. This would do no harm and might be productive of good in the way of bolstering up the weak-kneed men of the profession who are too timid to ask a fair fee for their services, and might also serve to educate that portion of the public which seems to think that a dollar pays for "cleaning" the teeth, no matter how well or badly it is done nor how long it takes, and that other fees should be in proportion.

But let me say that there can be no fairness in a uniform fee for a given service.

The lack of detailed knowledge, as I have said, consists in not knowing what one is doing financially, not knowing what a given class of operations cost the office in time and money nor what returns are realized therefrom.

These things are necessary knowledge in order to dispel the lack of detailed knowledge underlying and responsible for being underpaid.

If a man knows beyond a doubt that when he is paid for a given operation, only 10 or 20 per cent. of the fee is his for his labor, and that the rest goes for material, rent, light, heat, office girl, laundry and other expenses, and if he also knows that another class of operations, after paying its just share of all the above-named expenses, leaves for his services 80 or 90 per cent. of the fee received, it is obvious he knows the first class of operations is underpaid.

And a little courage, born of this exact *scientific,* if you please, knowledge, will enable him to make the hours of his labor more nearly even in earning capacity. But if he does not *know* his *business,* he has not the ability to place his finger on the weak class of operations and consequently has not the courage dependent thereon, why, he is at the mercy of the "tight fisted" public.

Our net returns of the various earning accounts are the correct index of the value the public places on our ability in those directions. They are the *efficiency* marks the public gives us in those branches of our profession.

If we think we are more efficient than the indices show, then it is up to us to know the business side of our offices and to spunk up a little and get what is coming to us.

I would epitomize thus: To be better paid we must

1st. Render full and fair value in the shape of our very best services.

2d. Know every detail of our office business, and

3d. Have courage to ask a good honest fee and keep after it till we get it.

Dr. Thomas L. Gilmer:

Dr. Blair has given us a broad, elevating and intelligent discussion of a timely subject. We all realize that the dentist's pecuniary returns are inadequate to the service rendered, especially when we consider the benefits bestowed upon mankind through his services.

Little instruction is given in economics to the student in dentistry while preparing for his life work. A very few schools do attempt training in this useful branch, but the number is so few that it is almost

a negligible quantity. A student should not be turned out to commence his life work without giving him knowledge of practice building and some instruction as to a scientific method of making charges for his services. Few dentists ever fully learn the latter. To be highly qualified to practice one's profession, and at the same time have a financial sense, does not, in my opinion, necessarily constitute a dual existence, as indicated by the Essayist. The two combined give the superior man. They are a combination forming, when properly adjusted, a perfect whole. Continuous growth, mentally, demands remuneration to give opportunity for better facilities for this growth.

It is the duty of all men to cultivate financial methods, that they may properly care for their families and educate their children. Furthermore, he should not forget that old age will surely come to him, if he lives, and what is more pitiful to see than a proud old man who has been prominent in his profession, dependent in his last days upon the charity of his more fortunate professional brethren. Habits of economy and providence should go hand in hand with professional growth. If properly balanced they give the well-rounded man. It is true that the best qualified and most successful dentists do not receive fees as large as the best lawyers or the best physicians and surgeons, but the average dentist fares almost if not quite as well in this respect as does the average doctor of medicine or the average lawyer. Neither the average physician nor the average lawyer is blest with a large income.

If we select twenty-five dentists, twenty-five physicians and twenty-five lawyers in any large city, all being equally prominent, i. e., the dentist prominent among his own professional brethren, and the physician and lawyer among theirs, we find a great disparity in their incomes. The lawyer will have the advantage over the physician and the physician over the dentist. It is a strange commentary on man that he will not begrudge a lawyer who saves for him fifty or a hundred thousand dollars a fee of ten thousand dollars or more, while the same man would be unwilling to pay a physician as much for using his best efforts at saving his life or the life of one of his family. We can understand some of the reasons why one willingly pays a fee to a great internal medical man or surgeon, which would not be tolerated from the dentist. In the first place the physician and surgeon is supposed, in many instances, to be dealing with life and death, while the dentist is not supposed to have any such important rôle in life. In the second place, the laity has but small conception of what dentistry is or how closely it is related to medicine, or that its practice is the treatment of and the prevention of disease. Dentists are looked upon as a rather high grade

of mechanics, as the surgeon once was. Until we can educate mankind out of this erroneous conception we will not come into our own.

. . . . . .

I am well aware, as the Essayist has said, that the number of people to each dentist is seemingly not large, but if we do our duty in educating the people to their needs we have not half enough dentists. The people are being educated, too slowly it is true, but this education probably grows apace with the men being graduated. There is no probability that dentistry is anything like so crowded as is medicine. There are fewer dentists in the land than physicians and dentists are not being made nearly so rapidly. Even the busy dentist does not average more than four or five set engagements a day. Taking out Sundays and holidays, broken engagements and vacations, he does not average over two hundred and eighty work days in twelve months. If he averages four and one-half patients a day the number is a trifle less than the estimate given for Chicago, where we have comparatively a large number of dentists to population. Then when we take into consideration that we see many of these four or five patients four or five or more times, we cut the number of individuals served probably one-half. It would not be safe to baldly state that the average busy dentist does not serve over six hundred patients in one year, but it may not be far wrong. If it is true, and if there are fifteen hundred dentists in Chicago, we have only sufficient to serve nine hundred thousand people, less than half the population. If all the people demanded our services, then more than three thousand dentists would be required to properly serve them. It has been said that about one-fourth of all the graduates fall out of the profession for one reason or another—then practitioners are dying all the time. If we educate the people to their needs, and do all for them that should be done, it will be some time yet before there will be an over-production of dentists.

It is true, as was said, that we do ourselves an injustice by not fully realizing how much good we are doing our patient in curing him of and fortifying him against disease. Did we more fully know this we could feel justified in getting greater compensation for our services. We are too inclined to think of our work as a mechanical service, such as might be rendered by a rather high-grade artisan. We should think of our work as caring for a part of our patient's body, so essential to his well-being.

Let it be borne in mind by the young men that it is not all in getting large fees which assures a competence, but fully as much in the taking care of the fees and safely investing them. A little money invested and

added to grows wonderfully fast. You know how fast interest grew when you were in debt. It grows just as fast if it is coming in.

In conclusion, a word about the essayist. But few, if any, present are so intimately acquainted with Dr. Blair as I, and I am going to venture a few words to the younger men regarding him, because he has been a success not only in a professional way, but in a business way, and has not neglected his profession on account of money-making, but carried on both and been successful in each.

(*This article will be continued in November issue.*)

MAKES A CHARGE FOR CONSULTATION

A CERTAIN dentist, enjoying a full practice, has for some years been in the habit of examining teeth, giving advice, and making estimates without charge. This required from three to fifteen minutes each time, according to the case. It was time spent without remuneration.

He decided such a course was unjust to himself. He then established the following system. For examinations requiring only two or three minutes he charges nothing. For examinations requiring ten or fifteen minutes he charges $1.00. There is no fee less than $1.00.

It has caused much discussion in his neighborhood and some criticism. He makes the following explanation to patients who ask: "Every minute of my time is valuable to the patient whom I serve. It is never more valuable than when spent in giving advice."

"My time is my capital and I must receive compensation for it. I will do my best for you, but it is only fair that my time, however spent, should bring a cash return."

Many patients who formerly received consultations free have accepted the new basis as just to all concerned. One lady said, "I see now that your plan is fair. I never thought of it in that way before. My other dentist never gave me to understand that his time was valuable."

The dentist reports that his practice has not fallen off, and that all his time is now revenue producing.

Dentists everywhere, by the use of courtesy and tact, can apply some such plan to their decided financial benefit. Increased respect in the community will also result.

A COLLECTING LETTER

One of New York's prominent nose and throat specialists uses the following letter form as a note on statements of accounts past due. In his work, as in ours, accounts sometimes run long past the date on which they should be paid. He practises where expenses are high and competition keen. Here, as everywhere, the value of a pleasant personality is great, and business procedures should be courteous as well as firm.

The letter is as follows:

Dear Sir: Permit me to draw your attention to the enclosed bill which has been rendered to you on ——— (here are filled in the dates on which statements were rendered). It is customary for me to turn my accounts unpaid after six months to my attorney, Mr. John Smith, — Broadway, New York City, as my practice does not permit me to give them personal attention after that time.

I am sure this matter has simply been overlooked and that bringing it to your notice will secure for it prompt attention.

I am sending this letter by registered mail, believing that I may have had your address incorrect.

Yours respectfully,

The doctor makes the following very interesting comments on this letter and its effects. He says, "This letter assumes their desire to pay. It puts part of the blame on them and assumes part of it for me, as I say I may have had their address wrong. It makes some of them feel rather self-ashamed and brings remittances from many.

"Once in a while some man will come in with one of these letters and say, 'What do you mean by sending me a letter like this?' and he will follow it up with a lot of talk. I let him talk it all out without interrupting him. Then I say, 'You mustn't come into my office and talk to me like that, because I'm a pretty decent sort of a fellow and don't deserve it. You must know that I am not in practice for the love of it. If I were I should have transferred your account to the charity side of my ledger, and you wouldn't like that. All that is necessary is that you send me a check and we will be on good terms again.'"

The result of these tactful and firm methods is that in a long list of accounts, in a form of practice notorious for poor collections, this practitioner has less than a dozen old accounts and nearly all of these are in process of payment by installments.

DENTAL OFFICES AND DENTISTS, AS SEEN BY THE PUBLIC

(*Continued from June Number*)

NUMBER THIRTY-ONE.

Large sign. Approach inconvenient and dirty: long narrow stairs.

Reception room gloomy and shabby, very dirty and not modern.

Reception room had dust on everything. Chair in poor condition and not modern. Instruments poor. Parquet floor covered with large ink stains.

Dentist's appearance was a disgrace to his profession—clothes, linen, shoes and hands dirty: only thing clean was his face. His manner was courteous.

Attendant was careless, but polite.

NUMBER THIRTY-TWO.

No sign. Approach good.

Reception room very good.

Operating room modern and everything good.

Dentist's appearance very good, his manner everything that could be expected. Very busy.

No attendant.

NUMBER THIRTY-THREE.

No sign. Approach convenient. Clean carpets in the hall, though worn.

Reception room was good.

Operating room was modern and everything in good condition, but could be a little cleaner.

Operator's appearance was good and his manner polite.

No attendant.

NUMBER THIRTY-FOUR.

Approach convenient and clean.

Reception room was not modern; it was clean but shabby—furniture and carpets well worn.

Operating room was clean; chair and instruments in good condition but not modern.

Dentist's appearance good and manner courteous.

No attendant.

NUMBER THIRTY-FIVE.

Sign. Approach inconvenient; long narrow stairs, quite clean.

Reception room not cheerful. There were a few good chairs which were modern, and several with seats broken. Dirty carpets, much worn.

Operating room was divided from the reception room by a screen, which was very dirty and not modern. Instruments not in good condition. Chair shabby. Window curtains very dirty; walls match scratched. Table where mechanical work was done, very dirty.

Dentist's appearance was untidy, his clothes needed scouring and pressing; linen clean. He needed a shave. His manner was courteous.

No attendant.

NUMBER THIRTY-SIX.

Sign. Approach convenient and clean.

Reception room was light and dirty; furniture gaudy but in good condition.

Operating room was not modern; chair was filthy dirty and towels were on the floor; there was a general air of neglect. Instruments good.

Dentist's appearance good and his manner courteous.

Attendant neat.

NUMBER THIRTY-SEVEN.

Sign. Approach convenient and fairly clean.

Reception room was gloomy and not modern; furniture was in bad condition—springs in couch broken; carpets worn and everything dirty, cheap and gaudy. Walls covered with small, cheap pictures.

Operating room was not modern. The chair was shabby and dirty. Instruments were in sight, and not in good condition. There was water in a dirty glass on the table.

Dentist's appearance was good and his manner was courteous. His linen and clothes were also good, but he had dirty finger nails.

Attendant was clean.

NUMBER THIRTY-EIGHT.*

Sign. Approach by dirty elevator.

Reception room was cheerful, comfortable and clean.

Operating room modern and very clean. Everything was in good condition.

Operator's appearance was good and his manner was courteous.

Attendant neat, ladylike and intelligent.

* This is the only one of twenty offices in which the operator does nothing at all from the time he washes his hands till he examines the patient's mouth.

NUMBER THIRTY-NINE.

Approach inconvenient—a long dirty, dark staircase.

Reception room was light, modern and clean.

Operating room had chair and instruments in good condition.

Dentist's appearance very good and his manner polite.

No attendant.

NUMBER FORTY.

Sign. Approach by elevator, which was dirty, dark and stuffy.

Reception room gloomy and not modern. Hangings dusty. Carpets and furniture in good condition, but dirty.

Operating room was not modern; the chair was shabby and instruments were in sight.

Operator's appearance was fair. His manner was courteous and his language polite, but he was very rough in handling his patient—one would think he was prying the jaw apart.

Attendant neat and ladylike.

NUMBER FORTY-ONE.

Approach convenient but dirty.

Reception room light, fairly clean and not modern. Furniture in good condition.

Operating room was not modern. Chair and instruments in good condition.

Dentist's appearance good and his manner courteous. Convincing talker.

No attendant.

NUMBER FORTY-TWO.

Approach inconvenient; halls and stairs were rather dark.

Reception room was clean but not modern, in good condition but not very cheerful.

Operating room was not modern, though the chair was in good condition. Instruments in sight and in good condition.

Operator's appearance and manner were good.

Attendant neat and ladylike.

PARAFFIN IN GASOLINE AS A SEPARATING FLUID.—Paraffin dissolved in gasoline (saturated solution) makes an ideal separating fluid, it leaving only the thinnest coating of paraffin on the impression, and the model breaking away clean, smoothly, and easily.—A. P. KILBOURNE, *Dental Summary* (from *The Dental Cosmos*).

EXPERIENCES

This dentist certainly has some good ideas, but it will be possible for him to go one step further, and that step a big one. He has a high pressure syringe and a Somnoform outfit. By the use of these he should be able to prevent pain in practically all cases. There is little need to "hurt patients like everything," and either the Cocaine or the Somnoform will be better than the talk. I know. I've just had some excavating done under Somnoform, and I would go ten miles and pay ten prices rather than put up with what I tried to stand without the Somnoform. I wasn't put to sleep, but I had eight minutes of comfort where I had previously had five minutes of torment.

If this dentist wants to so build his practice that he can choose patients and make fees to suit himself, let him take up the study of making operative work painless by same methods.—EDITOR.

Editor DENTAL DIGEST:

Your letter of recent date, requesting me to write an article on how I succeeded where the man before me failed, was duly received and I will comply with your request as best I can.

In the first place, he was sloppy and untidy in his person, and his office was just like his person. People tell me he never pretended to wash his hands when going from one patient to another, or when commencing work in the morning or after lunch, and such a thing as disinfecting his instruments was unknown to him.

In the second place, he wasn't thorough in his work. Every one said he was *so easy* that they liked to go to him, if his work would *only stay,* and if he would only keep his place and himself clean. But his work was a series of failures, and as a result the best people nearly all went away to have their work done.

I always try to dress neatly and keep clean, and I always keep my office as clean as constant effort can make it.

I never leave a tooth cavity until it is excavated thoroughly, and while I am using a sharp bur and hurting my patient like everything, I always tell them how careful I am trying to be and that I will cause them just as little pain as possible and still do their work well. I tell them that they would soon forget how careful I was, if I slighted their work, in order to not hurt them; and when their work failed they would quit me. I also say to them that they will soon forget how much it hurt, and they will be good patients of mine for years to come, if the work stays well; and it usually does.

I have always tried to keep up with the times by getting everything that I thought would help me do better work and help me make more money out of my time. For instance, I have a Myers high pressure

syringe that has made me many times its cost, beside making me a good many friends. It enables me to do what the other fellow didn't do, and that is to relieve a patient of severe pain instantly. I force a 1 per cent. solution of cocaine into an inflamed pulp that is driving the patient frantic and makes them bound to have the tooth extracted. The tooth stops paining instantly, and then a little good advice usually results in allowing me to take the pulp out and filling the roots. Many times an inlay or a crown is the result, and from four or five to twelve or more dollars is the fee instead of fifty cents for extracting. Another thing I have, that has made me lots of money and lots of friends, is a somnoform outfit for extracting teeth that can't be saved.

I frequently give a 5c.c. tube of somnoform to some frail, nervous little woman, and in a minute she is unconscious. I take out anywhere from one to twenty roots and broken teeth, without the slightest pain to the patient and no bad after effects, and that means all the women in her neighborhood, who have bad teeth, will come to me, instead of going to the man, perhaps nearer them, who is growling because he doesn't have enough business.

I charge a good price for all my work, and I tell them while I am doing the work that there is such a thing as cheap dentistry, but it is worse than no dentistry, and they nearly always say "Yes, that is so."

To sum it all up, my rule is:

Pay cash for everything.
Be thorough, even to being cruel, if necessary.
Be clean in every way.
Be up-to-date in everything.
Use your wits and don't be afraid to talk and explain the whys and wherefores and insist on the cash.

Respectfully yours,

PENNSYLVANIA.

Editor DENTAL DIGEST:

At the age of thirty-two I obtained my degree at the Western Dental College of Kansas City, Mo.

I have practised here two years. Population 800. Competition part of the time because it doesn't take a competitor long to find out that this is no "Eldorado."

While I believe there is more dental work being done in this state than ever before, the prices for dental services are lower than they were ten years ago. (I have an account of the prices I paid then for

dental service.) I do not understand why this is the case unless it is because now there are so many more practising than formerly and too many cut prices to encourage a little more practice. The dental quacks are getting thicker and keep the laity posted on their prices, while the quality of services rendered by them is never considered until after they have had some dear experience.

In the face of all this the necessities of life have increased in price from 25 to 100 per cent.

There may be a remedy for the demoralized dental prices.

Now please do not infer from my letter that I have the blues for I have not.

Yours truly,

KANSAS.

Dear Brother Bill: Before the raise in the price of platinum, the price of a set of teeth was less than a dollar; now for that dollar you will not be able to obtain the six front teeth. The manufacturers raise the price according to the value of the metal, and also according to the wages they pay to the workingmen in the factory. That is business sense. At the time that the set of teeth cost less, the price of a plate was, at the very lowest rate, $10.00. Some time ago the price on metals, principally copper, was raised, everything in proportion, but nevertheless even the nuts of the bolts of the flasks were raised. That is business sense. Now the demand on rubber obliges the manufacturers to raise their prices, keeping up with the demand. The dentist (not to speak of the advance in the cost of living), lowers his price. You can get the plate for a few dollars. Will you tell me if that is business sagacity? He has to employ inferior goods, inferior workmanship; is that business sagacity? The manufacturers govern their prices according to the cost of materials, cost of production and demand. The dentists must govern their prices according to cost of materials, cost of production and service they render. The manufacturer, if an article does not pay him, retires it from the market. The dentist, if an article does not pay him, *ought* to retire it, that means ought not to make it. That is business sense. Ask a manufacturer if even the raise in the price of rubber dam (which is double than it used to be several years ago) should not have a proportionate raise in the price of a gold filling. That is business sense.

Yours,

BROTHER DICK.

Editor DENTAL DIGEST:

I am a married man with two children and am a member of the State Dental Association. I have saved about $2,500.00 during the past two years and have invested in a home here. I have about $500.00 in the bank as a reserve fund. I will also state that I have been here for only two years, but was well acquainted before I came here, having moved from a neighboring town. I have had competition part of the time in the way of a few nondescripts that blow in and out. I cannot tell that they affect my practice, as they do not catch any but those that would ordinarily go to the cheap advertiser. My fees are comparatively modest, but at least twice as much as has ever been charged by dentists here before.

I will also state that my office compares favorably with any in the cities, and my equipment is probably worth at first cost $2,000.00. I have enjoyed your articles on business building to the limit, although I had already learned some of it as Brother Bill had, by rubbing against the seamy side of the world for awhile. Yours truly,

TEXAS.

Editor DENTAL DIGEST:

How many dentists are there who subscribe to THE DIGEST that get their only exercise by extracting teeth or twisting around while putting in gold fillings?

Some years ago I was in that class with the added pleasures of a torpid liver and no appetite.

I want to tell you how I changed all this and the pleasure I get from playing tennis.

In every hamlet in the country there is a court a dentist can play on, or he can join a club.

Twice a week in the mornings from 8.30 to 10.30 a brother dentist and myself play a good stiff game; then a shower bath and rub down, and to the office for the day's work. The thought comes to one, how can he have a steady hand after that exercise for inserting a gold filling? Answer: I never knew what a steady hand was until I played tennis.

Second thought: It's a lady's game. Answer: Ask a fair player to have a set with you.

In closing, would say the game develops muscle, quick action, quick thought, good digestion and a liver that can stand anything.

I need them all in dentistry, don't you?

Respectfully,

W. M. T.

PRACTICAL HINTS

Baking Crowns.—Cut clay pipe-stems into one-half-inch lengths and use them to support pin crowns when baking in the furnace. They will stand the heat of any furnace.—G. B. Speer, *Dental Summary.*

Cast Metal Plates.—In finishing, mercury may be used to remove sandpaper scratches on cast-metal plates, thereby shortening the work of polishing. Apply with chamois skin and rub until plate is smooth. Slight amalgamation takes place, but not sufficient to be objectionable.—Theran J. Ford, D.D.S., Homer, La.

Relief of Pain after Applying Formo-Cresol.—Severe pain following the sealing in of formo-cresol (most liable to occur in multiple rooted teeth), points to a likelihood of some vital tissue in one of the canals. Remove treatment of formo-cresol and neutralize the formalin by ammonia water. Seal in treatment of phenol compound.—Carl M. Cahill, Chicago, *The Dental Review.*

To Rotate Anterior Tooth where Insufficient Space can be Had to a Band Around It.—Cut a piece of metal nearly as wide as the tooth mesio-distally and long enough to reach from near the gum margin on the labial over the cutting edge nearly to the gum margin on the lingual. Adapt it to the tooth; then remove, and with a spear-pointed drill cut several holes through labial and lingual portions to insure good cement attachment. Tubes, etc., are then soldered on (preferably near cutting edge of metal).—Theran J. Ford, D.D.S., Homer, La.

An Easier Way to Fit the Logan Crown.—After grinding the root and enlarging canal, trim a wooden peg to approximate size of canal, but long enough to extend one-fourth inch out of root. Place peg in canal. Take impression with mouldine, allowing the peg to come away with the impression. Run model of Melott's metal. Remove mouldine and peg from metal and grind crown to fit model, occasionally trying in the mouth to be sure of proper length.—Theran J. Ford, D.D.S., Homer, La.

To Crown a Root when Its Interior has so Decayed that a Mere Shell is Left.—Remove decay and seal apical foramen. Make several small undercuts in different parts of its interior. Fill lightly with amalgam and with a sharp-pointed instrument (approximating the size of the pin of the crown to be used) work an opening nearly to the end of the root. Pack the amalgam hard around the instrument, then loosen and remove it, leaving the amalgam in place. Try pin of crown in to see that canal is of proper shape. When amalgam has hardened, cement crown in place.—Theran J. Ford, D.D.S., Homer, La.

When forcing Sulphuric Acid into a Tooth which has a Fistulous Opening through the Gum, it is well to place a pledget of cotton soaked with soda water over the opening of the fistula. Any sulphuric acid forced through will then be neutralized before it comes into extensive contact with the gum tissues. Burns may often be prevented in this manner.—E. S. Ulsaver, D.D.S.

Case of Lower Cuspid Decayed Extensively about an Old Filling.—A case recently presented where a lower cuspid had decayed extensively about an old filling. The tooth tissues had been decalcified, but maintained, in large part, their original form. The effort to remove this decay caused severe pain because of the close approach of the decay to the pulp. It was successfully handled in the following manner:

The tooth was dried and protected from moisture and a crystal of thymol placed on the decayed tissue. The application of a hot instrument melted the thymol, and it sank into the decalcified tooth tissue. The tissue was then removed with much less pain to the patient. In two or three cases where I have tried this lately it has proven very satisfactory.—E. S. Ulsaver, D.D.S.

Tying a String about a Tooth Suffering from Pericementitis.—The suggestion to tie a string about a tooth suffering from pericementitis and by tension on the string to oppose the pressure of the bur when drilling into the tooth is so old that all should know it. But apparently all do not, because complaints of pain caused this way are very common. By a little care dentists may almost wholly prevent pain in opening teeth of this sort.

Removal of Impacted Lower Third Molars.—The method used in the removal of impacted third molars, thanks to Dr. C. Edmund Kells, Jr., of New Orleans, is to place the patient under nitrous

oxide gas, then with a No. 8 or No. 9 bur, following the free margin of the gum, release the tissue around the tooth by drilling the process buccally and distally, until you have a groove around the tooth in the mandible. Then on the recovery of the patient you have the gum tissue released from the bone, and can insert the bur under the margin of the gum tissue and continue to drill with far less inconvenience to the patient while conscious than a tooth cavity preparation. However, the bur should be inserted under the free margin of the gum before the dental engine is started, as the blades of the bur will pick up the tissue and cause pain. If the blades of the bur fill, the shank of the bur heats up and, coming in contact with the tissue, causes pain, as well as when you touch the tissue which has not been severed from the bone at any point surrounding the tooth. Great care should be taken to prevent these conditions from existing. During the drilling, while the patient is conscious, I insert the probe often to see the depth the bur has cut, and when satisfied that the tooth has been well released around it and well toward the apex, I proceed to give the patient nitrous oxide gas; the second time, I use a lower alveolar forceps to remove the tooth, as I then can get a lateral motion as well as the lifting of the tooth up and backward from the socket, taking it out in the way of the least resistance.—A. Brom Allen, D.D.S., *The Dental Review.*

A Hint for Casting Plates.—Dentists who desire to cast plates of aluminum or Æodentalloy and use Twentieth Century Teeth, should observe the following hint for the protection of the platinum anchorages from the plate material.

There is, about each Twentieth Century Tooth pin, a little space into which the vulcanite is forced when making vulcanite plates. Into this space the aluminum or Æodentalloy casts, and by means of this space it reaches the platinum anchorage holding the pin. Aluminum and Æodentalloy are both solvents of platinum and reaching it in this manner, the anchorage is at once destroyed and the pins pulled out.

To prevent this make a paste with powdered kaolin, commonly known as China Clay, and water, having it about as thick as putty. With this paste pack the little open space about each pin. The same result may probably be obtained by making a paste with whiting and water in the same way. With this paste packed into these spaces, cast the plate as usual.

Aluminum and Æodentalloy are solvents of the anchorages and solder only, not of the pins.—S.

DIGESTS

TAKING OF IMPRESSIONS OF THE MOUTH FOR A HIGHER TYPE OF ARTIFICIAL DENTURES

By S. C. G. Watkins, D.D.S.*

* * * * * * * * * *

In taking an impression for a full upper and lower denture there are certain steps which must be taken in order to accomplish satisfactory results. The first step is to see that a cup is properly adapted to that particular mouth. Wax must then be heated and placed in the cup and a wax impression of the mouth taken. Then press away the wax in the wax impression, on the sides, while it is soft, or cut it out with the wax spoon, so as to leave a little room for plaster, and turn the back of the wax impression up a little so as to form a cup and prevent the plaster from running over the back of the impression and into the throat. You can then heat the impression cup sufficiently to melt the wax a little, so that it will stick to the metal impression cup, and then chill it to make the wax thoroughly hard. You then have a perfect impression cup. (Fig. 1.)

Prepare the patient then for the plaster part of the impression. If a patient is easily nauseated apply a few drops of spirits of camphor upon the tongue and ask him to swallow, that brings it in contact with the roof of the mouth and will prevent nausea, or, if the patient is exceedingly sensitive, put a drop or two on the roof of the mouth as well as on the tongue, and then ask him to swallow; also tell the patient, when the plaster is placed in the mouth, not to attempt to swallow or move the tongue at all, but allow the tongue to remain perfectly still in the lower part of the mouth. Direct also that if any bits of plaster drop from the back of the impression cup, no attempt to remove them or work them out of the mouth is to be made, but that they must be allowed to remain where they happen to be, as the chances are that

* Ex-President Alumni Association, Boston Dental College; ex-President Central Dental Association of Northern New Jersey, ex-President New Jersey State Dental Association, First Vice-President American Dental Association, President Interstate Dental Fraternity for New Jersey, Member of Odontological Society of New York, Member of First Dental Society of New York, Member of Southern Dental Society, Honorary Member of Northwestern Dental Association.

in the effort to force them out of the mouth they will be drawn back to the throat and cause the patient to gag. If the patient will breathe through the nose, and not through the mouth, any tickling of the throat which might cause coughing or an unpleasant choking feeling to the patient will be prevented. In other words, have the patient breathe through the nose, keep the tongue still, and remain absolutely quiet while the plaster is in the mouth.

You then prepare the water for the plaster by dissolving a little potassium sulphate in it in the bowl; then sprinkle the plaster into it.

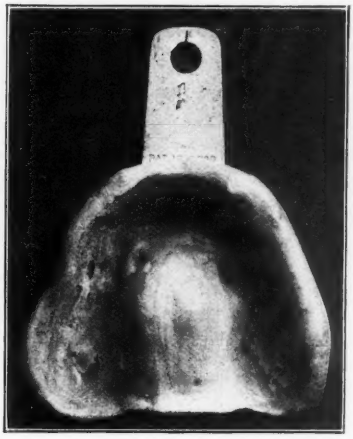
ILL. 2.—Completed impression of plaster in the wax impression cup.

ILL. 1.—Showing the impression cup ready to receive the plaster for full upper impression.

When you have sufficient plaster in the bowl, stir it up well, place it in the wax impression cup, and very quickly carry it to the mouth and press it home very firmly; hold it very still and draw the lips well out, so that the muscles will come into proper play and place on the sides of the impression. By carrying it up firmly in the mouth the wax impression cup fits the mouth so accurately that it will carry the plaster, if mixed thin, right into the tissues or mucous membrane, and in that way an impression is secured which is absolutely perfect (as seen in Fig. 2). If the impression has absorbed all the moisture from the mouth and adheres so closely and tightly that it seems almost impossible to remove it by simply raising the lip and syringing in a few syringes full of water above the impression, the plaster will take up the moisture and

you will be able to remove the impression with very little trouble, as it will then separate readily from the mucous membrane.

In taking an impression for a partial set, after the cup is selected I heat wax, place it in the cup and take a wax impression in the usual way. Then cut away the wax well from around where the natural teeth were, leaving plenty of room for plaster and for the wax which will be placed around the natural teeth afterwards; also press away the wax, while it is soft, from around the ridge, or wherever there are not natural teeth, trimming the wax down where it extends under



Ill. 3.—Wax impression cup for partial case.

the lip, so that it will not go up too high and press the muscles all out of place, but fit in such a way that the muscles of the lip will fall over the top of the impression easily. (Fig. 3.)

After the wax impression is trimmed out as described, take pink base-plate wax and cut it in strips about half an inch wide, more or less, according to the length of the tooth, or teeth, which you want to cover, then warm it over the blaze and mould it carefully around any natural teeth standing in the jaw, attaching it as well as possible to the neck of the tooth or teeth, covering also the entire tooth, but not running on the mucous membrane. This is illustrated in Fig. 4. Direct the patient to remain with the mouth open, so as not to dislodge the wax which is upon the teeth. Then mix the plaster, after having a little potassium sulphate dissolved in the water; mix it quickly and thin; pour it into the wax impression cup, carry it quickly in the mouth

and press it home firmly as directed in taking the impression for the full set, holding it firmly in place until it is thoroughly hard. Direct the patient as above in regard to breathing through the nose and keeping the tongue still. When the plaster is thoroughly hard, by a little lateral motion the impression can be removed. Be careful not to put too much force upon it at once, but bring the force to bear gently and gradually until the impression is removed from the mouth. If done carefully the wax will give sufficiently around the teeth so that the impression can be removed without tearing it all to pieces. You then have a perfect impression of the roof of the mouth with a wax impres-

ILL. 4.—Pink base-plate wax moulded upon the natural teeth in the mouth, ready to have the plaster impression taken over them.

ILL. 5.—Finished plaster impression for partial case, showing perfect plaster impression of roof of mouth with pink wax around the teeth.

sion of the teeth, as seen in Fig. 5. If the wax is drawn a little out of place from around the natural teeth, it can be pressed back with the finger or with an instrument so that it will be very nearly right. If not absolutely perfect, it can be remedied when the plate is made, by trimming the plate when putting it in the mouth, not in the laboratory. By having patience and taking time it can be so trimmed that it will fit almost perfectly around the necks of the teeth; but the principal thing is to get the impression absolutely perfect in the roof of the mouth, so that it will fit without rocking or any lateral motion.

If you will use modelling compound for partial sets, it should be used with the same care as you would use plaster, as there is but one object in view, and that is the perfect fitting denture. First, after a

properly fitting cup has been selected, soften the compound in hot water; when perfectly soft, place the cup, which has been previously warmed, so that the compound will stick to it, and be careful not to use too much compound; dip the compound which is in the impression in hot water for a moment to keep it the right consistency, and to wet it and prevent sticking to the teeth; then place it in the mouth quickly and press it very firmly so that you are sure it comes in contact with all parts of the mouth. It can then be chilled by syringing a few syringes full of cold water around under the lip and all over the surface of the impression cup. Then remove it from the mouth and trim it with the wax spoon all around where the natural teeth were, and also all the excess compound, and cut down around the upper edges where the impression has gone too high; then soften the surface of the impression, especially around the edges; then, with the finger, press the sides all out a little, about one-sixteenth of an inch all around, making room for a thin layer of modelling compound to be used as follows:

Soften the compound in hot water; then heat the surface of the impression over the blaze of an alcohol lamp or Bunsen burner, and apply the well-softened compound in the form of a thin sheet over the entire surface of the modelling compound impression cup which you have just made; immerse the whole thing in hot water to prevent sticking, and carry it into the mouth quickly and press it very firmly. The modelling compound impression cup which you have just made fits the mouth so well that when the thin layer of fresh, soft compound is placed upon it and forced up it is carried to every part of the mouth and around the teeth so closely and perfectly that when chilled and withdrawn an unusually perfect impression is obtained.

If dentists would take the trouble and pains to take impressions as described above, they would be so pleased and proud of the results that there would be a boom in prosthetic dentistry, and numbers of the young men would want to reach a higher water mark and take up that line of work and carry it to perfection, thus gaining a reputation which most of them could hardly hope for in any other line.—*The Dental Brief.*

Mixing Amalgam.—For mixing amalgam rapidly and at the same time to prevent contamination, place alloy and mercury in a thick rubber finger cot and roll between palms of hands.—P. G. Puterbaugh, Chicago, Ill., *The Dental Review.*

HORACE H. HAYDEN AND THE LESSON OF HIS LIFE

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THE great and, just now, much-needed lesson of Hayden's life is that he loved and honored his profession; he did not regard its duties as beneath him, nor think it necessary to boost himself socially by a parchment patent of gentility, or professionally by acquiring or pretending to have acquired theoretical knowledge or practical skill in branches of medicine or surgery foreign to his own field of practice. He was a dentist and not a general practitioner, and by his respect for his profession gained for it and for himself the respect of others. That is a lesson which should be taken to heart by those superior in their own conceit to the field of service for man which that profession legitimately occupies in its warfare against what is the most prevalent, as it is among the most insidiously degenerative, of human diseases.

In this hour, when the field of that warfare is being so widely extended, and the battle is being so gloriously waged by the dental corps of the army of preventive medicine, is not the time to talk of disbandment and reënlistment under the ægis of another flag, however honorable. Unless all signs are illusive, there is to-day in the dental army an *esprit de corps* not tolerant of such recreancy.

The title which Hayden created he honored and helped to make honorable. Other titles may be won, other culture may be acquired, but D.D.S., or its equivalent, must always remain the badge of a distinct profession. It is a profession whose true relation to medicine Hayden's contemporary, Elisha Townsend, clearly set forth fifty-six years ago in an address to the graduating class of the first dental college established in Philadelphia. Just now it is well that his words should be recalled. They are as follows:

"Dentistry is usually spoken of as a branch of the great healing art; but, in point of fact, it has grown, not out of the stem, but up from the root of the tree of remedial science, and as it has not sprung from, so it does not depend upon the older trunk, but stands beside it, deriving its separate nutrition from the same soil, indeed, yet by the independent energies of its own vitality. Hitherto, in fact, it has been indebted rather for shadow than sunshine to the elder-born growth. A thrifty sapling it has proved, with roots and branches of its own; distinct in its vital economy, though kindred in origin, distinct also in its fortunes, and necessarily so in the conditions and policy of its culture."

What was true in the days of the fathers is not less true in this later hour. Sophistry and pretense cannot alter the facts. Refusing to play the rôle either of flunky or parasite, dentistry will continue what Hayden made it, an independent, autonomous profession. May it ever remain as now, responsive to the call of humanity, and the ally of all agencies for human good. . . .—*The Dental Brief.*

THE ACTION OF FORMOCRESOL

By Howard R. Raper, D.D.S., Indianapolis, Ind.

Dr. J. P. Buckley of Chicago has given the dental profession a very valuable remedy, namely, formocresol, a description of which may be found in Johnson's new "Text-book of Operative Dentistry," or Buckley's "Modern Dental Materia Medica, Pharmacology and Therapeutics." Perhaps Buckley was not the first to use the now popular mixture, as Prinz, in his late work on materia medica and therapeutics, suggests. But the fact remains that Buckley is the man who gave it to the profession, and gave it in such a way that the profession accepted it.

Formocresol is a mixture of equal parts of formalin and cresol. Formalin is a 40 per cent. solution of formaldehyd gas in water. It is a strong, penetrating, irritating disinfectant and deodorizer. Cresol, a liquid, is a coal-tar product, whose disinfectant properties rank a little below those of formalin and a little above those of phenol. It is much less penetrating and irritating than formalin. Modified formocresol is formocresol plus a variable amount of additional cresol.

The mixture, formocresol, is to-day used more, perhaps, than any other agent by men who desire to treat putrescent pulps scientifically. A pledget of cotton saturated with formocresol may be placed in the pulp-chamber and hermetically sealed in teeth the pulp-canals of which are full of putrefying, gas-producing pulpal tissue, without producing an abscess—presuming, of course, that the operator's technique is good, that none of the putrescent matter has been forced through the apex by faulty instrumentation, and that no pressure is brought to bear on the cotton while being sealed in the pulp-chamber.

What, then, becomes of the gases that before the advent of formocresol used to force aseptic matter through the apical foramen? One of two things—either they are no longer formed in the presence of the remedy, or, if formed, they are in some way destroyed.

* * * * * * *

Buckley does not overlook altogether the germicidal and antiseptic action of his remedy, but he considers or seems to consider the chemical action a great deal more important.

While making notes preparatory to writing this paper the author has read the chapter on putrefaction in no less than six authentic works on chemistry and bacteriology; he has also read all pertaining to this matter in standard pathologies, operative dentistries, dental machines,

and the like, and has come to the following definite conclusion: The putrefactive process is a process science knows very little about, except in a general way. We know that bacterial action on nitrogenous matter, under favorable circumstances, brings about putrefaction, and that in this process complex bodies are broken up into bodies of simpler formulæ, but the exact chemistry of putrefaction is still a matter of much conjecture and confusion.

It is presumed that in practically all cases where the technique is good, formocresol gives results. The question to be considered here is, How are these results obtained—by the chemical or the disinfectant action of the remedy?

We have seen Buckley's stand in this matter. Prinz says: "Regarding the action of formaldehyde on a putrescent pulp, it should be remembered that its combination with the gases resulting from the decomposition of the pulp is of less importance to the welfare of the teeth than its destructive action on the bacteria and their products." Omit the "and their products," and Prinz expresses the writer's idea exactly.

It is hard to accept the chemical theory, first, because it does not explain fully what becomes of all the products of pulp-decomposition, but disposes of only two gases in a satisfactory manner, leaving other gases to occur in "minute quantities," and the other products of putrefaction to be acted upon in a "favorable" but mysterious manner; second, because, as no report of experiments could be found by the writer, the theory presumably rests on the inaccurate and incomplete knowledge of the chemistry of the putrefactive process; third, because the explanation of the action of formocresol on truly bacteriological grounds is much more plausible and comprehensible.

The action of formocresol, then, is principally, if not wholly, that of a powerful penetrating germicide and antiseptic. It stops the putrefactive process by killing or rendering inactive the bacteria which cause putrefaction. It does this when other germicides and antiseptics fail, because of its gaseous and penetrating nature. The author has no reason to suppose that the chemical changes suggested by Buckley do not occur, but believes them to be of minor importance only.

The remedy, then, is to be applied as a penetrant, when the canals contain putrescent matter, never farther than one-third the way into the canals, and not at all when the canals are cleaned of putrescent material, and when cresol or creosote is indicated and may be easily placed into the canals.

Those who believe strongly in the chemical theory of the action of formocresol are inclined to "seal up any tooth at the first sitting." This the writer considers to be bad practice. When there is a very

great deal of gas production he would advise leaving the tooth open, that is, after opening the orifices of the canals and making a cresol application in the pulp-chamber, the chamber is sealed only with cotton, and the dressing is allowed to remain for from twenty-four to forty-eight hours, at the end of which time formocresol may be hermetically sealed in the pulp-chamber with cement.

To quote Buckley: "Whenever pus can be mechanically removed, it is always better to dispose of it by this means rather than to do so by the use of some chemical agent." This is a very sensible and truthful statement, and applies to gases as well as pus. It is bad surgery to stop a copious flow of gases by sealing the tooth, depending on a chemical agent to destroy them.

If formocresol is regarded as a powerful, penetrating, irritating antiseptic and germicide, it will be found to be a most useful mixture in the treatment of putrescent pulps.

The reader's attention is called to another of Buckley's remedies, *i. e.,* phenosulfonic acid. In a few months it has grown indispensably useful to the writer. Literature concerning it may be found in Johnson's new "Text-book of Operative Dentistry" or Buckley's "Modern Dental Materia Medica, Pharmacology, and Therapeutics."—*The Dental Cosmos.*

DENTAL INSPECTION AT PRINCETON, IND.

Since the beginning of the dental inspection last year, it is reported by the local dentists of Princeton that a large number of school children have had their teeth treated. By far the greater per cent. of these children had never been to a dentist before and their presence at the dental offices had been the direct result of the dental inspection in the schools. This means, as far as the Princeton schools are concerned, that there will be a little less toothache, a little better masticated food, better digestion, better stomachs, less tendency to tubercular disease, nervous disorders, and fatal epidemics, better school attendance, more attention to studies with better scholarship and deportment, a more hygienic condition of the whole body with a better chance for healthful growth and for better citizenship. Good health and good attendance mean less expense to the community with a consequent lower tax rate. The school curriculum may be crowded and the time for instruction may be short; but medical and dental inspection will take but little time or trouble. The health of a boy or girl is worth more than any curriculum; for with health the curriculum can be mastered, but with-

out it, it will either not be mastered or partially and incompletely so. Dental and medical inspection have come and they are knocking at the doors of every school house in the land. Sooner or later they must be welcomed everywhere. Fortunate the children who are not long compelled to await their presence.—*Western Dental Journal.*

TETANUS

1. Of primary importance is the immediate cleansing of the wound and use of antitoxin.

2. The removal of the patient to a dark and quiet room.

3. The care of the patient by not more than two nurses of mild temperament.

4. The enforcement of absolute quiet.

5. It sometimes seems that noise and sunlight disturb the patient; certainly it seems to make them worse. These should be as far as possible excluded.

6. In no way should the patient be permitted to aid himself. This is of great importance.

7. The use of chloral, bromide and hot bathing. For a flagging heart the usual stimulants must be given.

8. Positively no company for days after all the symptoms have passed.

The average hospital is no place to treat tetanus and I certainly believe some have died who might have been saved had we better facilities for handling these unfortunates. They certainly should not be allowed in any ward and only the most private room for them is poor enough accommodation.

The future may do better for us in the way of treating this trouble, but for the present, drugs, to my mind, have no stronger hold upon its control than do the antitoxins.—*The Pacific Dental Journal* (from *Medical Times*).

MORE ATTENTION SHOULD BE GIVEN PROSTHETIC DENTISTRY

By O. H. Simpson, Dodge City, Kansas

In June issue of the *Western,* and in a recent issue of the *Summary,* there was an article by Dr. C. E. Talbert, of Nicholsville, Ky., on "Reswaging a Gold Plate After it Had Been Wired and Lugged."

While his scheme—that of lining original metal counter-die with

Moldine to prevent die from coming in contact with lugs and wire—has some merit, I would suggest that the metal counter-die be lined with modeling compound, or, better still, use an all-modeling compound counter-die.

Moldine has too much "flash," or, in other words, it is too readily displaced, and does not begin to force the plate against die until every minute corner and crevice is filled up.

If the plate has been warped during the wiring process and thereby failed to come in contact with the die at every point, the Moldine is apt to be forced in this crevice between plate and die before the plate begins to swage.

This would not be the case with modeling compound, as it is more rigid, and the plate will be forced in contact with the die at every point before all recesses or corners are filled.

Again, you can warm small bits of modeling compound, fill up any minute under-cuts, or wind a small rope of soft compound around the lugs. Adapt modeling compound die over the added bits of compound, chill the whole mass and swage. . . .—*The Western Dental Journal.*

"DENTES SAPIENTIA"

To hold the old customers, you must get out after the new.

When you think you are big enough, there is lime in the bones of the boss, and a noise like a buccaneer is heard in the offing.

The reputation that endures, or the institution that lasts, is the one that is properly advertised.

The only names in Greek History that we know are those which Herodotus and Thucydides graved with deathless styli.

The men of Rome who live and tread the boardwalk are those Plutarch took up and writ their names large on human hearts.

All that Plutarch knew of Greek heroes was what he read in Herodotus.

All that Shakespeare knew of classic Greece and Rome, and the heroes of that far-off time, is what he dug out of Plutarch's Lives. And about all that most people now know of Greece and Rome they got from Shakespeare.

Plutarch boomed his Roman friends and matched each favorite with some Greek, written of by Herodotus. Plutarch wrote of the men he liked, some of whom we know put up good mazuma to cover expenses.

. . . . . .

WHEN Moses took over the Judaic account, Jehovah was only a tutelary or tribal god. He was simply one of many. He had at least forty strong competitors. The Egyptians had various gods; the Midianites, Hittites, Philistines, Amorites, Ammonites had at least one god each.

Moses made his god supreme, and all other gods were driven from the skies.

What turned the trick?

I'll tell you—the writings of Moses, and nothing else. So able, convincing, direct and inclusive were the claims of Moses that the world, absolutely, was won by them.

In the Mosaic Code was enough of the saving salt of common sense to keep it alive. It was a religion for the now and here. The Mosaic laws are sanitary laws and work for the positive, present good of those who abide by them.

It is not deeds nor acts that last—it is the written record of those deeds and acts.

It was not the life and death of Jesus that fixed His place as the central figure of His time—and perhaps of all time—it was what Paul and certain unknown writers who never even saw Him, claimed and had to say in written words.

HORATIUS still stands at the bridge, spear in hand, because a poet placed him there.

Paul Revere rides adown the night giving his warning cry at every Middlesex village and farm, because Longfellow set the meters in a gallop.

Across the waste of waters the enemy calls upon Paul Jones to surrender, and the voice of Paul Jones echoes back, "We have not yet begun to fight!" And the sound of that fearless voice has given courage to countless thousands to snatch victory from the jaws of defeat.

In Brussels there is yet to be heard a sound of revelry by night, only because Byron told of it.

Commodore Perry, that rash and impulsive youth of twenty-six, never sent that message, "We have met the enemy and they are ours," but a good reporter did, and the reporter's words live, while Perry's died on the empty air.

Lord Douglas never said:

> "The hand of Douglas is his own,
> And never shall in friendship grasp,
> The hand of such as Marmion clasp."

Sir Walter Scott made that remark on white paper with an eagle's quill, and schoolboys' hearts will beat high as they scorn the offered hand on Friday afternoons, for centuries to come.

Virginius lives in heroic mold, not for what he said or did, but for the words put into his mouth by a man who pushed what you call a virile pen and wrote such an ad for Virginius as he could never have written for himself.

Andrew J. Rowan carried the Message to Garcia, all right, but the deed would have been lost in the dust-bin of time, and quickly too, were it not for George H. Daniels, who etched the act into the memory of the race, and fixed the deed in history, sending it down the corridors of time with the rumble of the Empire State Express, so that to-day it is a part of the current coin of the mental realm, a legal tender wherever English she is spoke.

THE Old Guard dies but never surrenders. Whipped, torn, muddy, bloody and magnificent, Cambronne, the last survivor, stands with broken sword, defiant and unsubdued.

He, like Ney, might have shouted, "Come and see how a French soldier dies!"

The English are awed by his courage, and hesitate to again fire.

"Brave Frenchman, surrender!" an officer calls in pleading accents. And Cambronne hurls back a word that can only be printed in French—the most indecent and insulting word that human lips can utter.

The English fire, and Cambronne falls, weltering in his blood.

They kill the man. It is the only thing to do.

I know it is a shame to say it, and I apologize on bended knee, but this scene of

the death of the last of the Old Guard is an ad. for the French, written by Victor Hugo, who loved the French and hated the English.

And the ad has wrought its impress on the heart of humanity. The Battle of Waterloo is the battle as the genius of Victor Hugo gave it to us, and none other. The things that live in history are those well described by writers who knew and joyed in the Cadmean Game.

ALL literature is advertising.

And all genuine advertisements are literature.

The author advertises men, times, places, deeds, events and things. His appeal is to the universal human soul. If he does not know the heart-throbs of men and women, their hopes, joys, ambitions, tastes, needs and desires, his work will interest no one but himself and his admiring friends.

Advertising is fast becoming a fine art. Its theme is Human Wants, and where, when and how they may be gratified.

It interests, inspires, educates—sometimes amuses—informs and thereby uplifts and benefits, lubricating existence and helping the old world on its way to the Celestial City of Fine Minds.—*The Philistine.*

CONSTRUCTING A DENTURE FOR A MOUTH WITH CLEFT PALATE *

BY W. B. KIGER, D.D.S., COLUMBUS, OHIO

THE impression for such cases requires to be taken in plaster, so the cast is as nearly the reproduction of the mouth as possible.

Select an impression tray of good depth and large enough to embrace the entire arch, mix the plaster of Paris about the usual consistency, add a small amount of salt to quicken settling, also, add some carmine or methylene-blue to give color to impression to show where to separate because this requires patience and skill not to mar the cast.

In removing of impression from the mouth use force enough to fracture the impression, because some of the plaster has passed into the nasal cavity. This part will remain after removal of tray, so take a pair of pliers and remove the remaining portion by forcing this backward to the throat, where it can be removed and placed to part remaining in tray.

The remainder of procedure—construct the denture as usual except use the Eureka suction appliance to the sides of the arch.

This denture has been used for about two years, and during this time the rubber disks have caused no trouble, except their renewals. The patient has made improvement in speech and much has been added to appearance, saying nothing of usefulness of such dentures in aiding mastication.—*The Dental Summary.*

* Given as a clinic at Ohio State Dental Society, 1909.

EDITORIAL

WHAT MAKES MAGAZINE ARTICLES VALUABLE

Some writers are much concerned as to whether the articles on Dental Business now appearing in various dental magazines, are written by dentists who have themselves made business successes. Dr. Root, in the August number of the *Western Dental Journal,* gives this subject editorial attention.

It may help us to form better judgments of such articles, and all other articles, if we examine for a moment the factors which make an article of value to the reader.

The human mind has many forms of expression. For want of a better term these forms of expression are usually spoken of as "gifts" or "faculties." Some of those who have studied these faculties have grouped them under various headings, such as the imaginative faculties, including Hope, Ambition, certain forms of Constructiveness; and the executive faculties, including Will, Size, Weight, Comparison, Language, etc.

Probably all these faculties are present in some degree in every normal human mind. The difference in the form of expression used by different minds might be described by saying that these faculties are the elements of the mind, just as the drugs are the elements of a prescription; and that each mind is given its peculiar powers of expression by the proportions in which the faculties are present. Thus, in some minds the imaginative faculties are large. They constantly conceive new things, or old things in new forms. If the expressive faculty in that particular mind is Language, the conception will be expressed in writing or speech; if it be some faculty resulting in action, the conception will be expressed in action rather than words. If the faculties of both speech and action are strong, it will be both spoken and acted.

There are probably few imaginative minds in which the expressive faculties for both speech and action are strong; but there are many in which one of these forms of expression is adequate. These men cannot both write and act, but they can write *or* act.

It is a mistake to assume that the value of a written contribution is measured solely by the ability of the writer to properly express it in action. Common-sense requires that the writer on scientific or "practical" themes know something about his subject, that his imaginative faculties shall work on a basis of facts; obviously, the more he knows

about the subject, the better, because his imaginative faculties cannot produce material of value on matters of which he knows nothing. What I am trying to develop is that a man may often tell others how to do things which he cannot do himself, and his telling be both accurate and valuable.

All modern experience affords illustrations of this. Many a teacher cannot do well the things he teaches others to do. It is said that one of the most celebrated of the European teachers of vocal music is a little old lady who never received notice as a public singer, yet no opera star is regarded as finished who has not been trained by her. Alexander Hamilton gave new birth to American Credit and devised the financial system which supports this government to this day, yet he could so little manage his own finances that out of the returns from the largest law practice of his day, he is reported as unable to command the sum of three hundred dollars in a time of financial need.

We need not go far from our own field to find men who can tell others how to do things better than the teller can do them. In our dental colleges are teachers who turn out better practitioners than the very faculty members who produced them.

There is a very real and valuable thought to be gotten from all this. The value of a conception is determined by the basis of knowledge on which it is constructed and the conceptive power of him who forms it. It is, of course, better if he can work the thing out in action before writing it. But if he cannot do this, it is better that any really valuable conception should be written than that it be lost.

The value of an article to any given reader is not wholly dependent on the power of the writer to do the thing he writes about. *It is largely dependent on the capacity of him who reads to absorb the thought and express it in action.* Get that plainly in mind; the value to you of the articles in any dental journal depends largely on your power to absorb their thought and to work it out in improved methods in your own practice. If a writer clears up for you a difficult point in practice, it is immaterial to you whether he does it well in his own practice. If he suggest sane methods by which you may increase your income, you are not concerned as to whether he is well-to-do. What you get out of an article is the measure of its value to you.

It is on that basis that articles offered to The Dental Digest are accepted. Each article is carefully read to see what it contains for the average reader, what he can take out of it and apply to his practice. If it has value in this sense it is accepted. We should be glad to have articles every month from dentists whose names are famous the land over, but we cannot do that. The Dental Digest doesn't meet with

the approval of many of the older men in the profession. It is too heretical; it wants dentists to make money, to have comfortable homes, and some leisure, and a competence in old age. It doesn't want these things confined to the few dentists whom unusual natural ability or favoring circumstances have made leaders in any community. It wants them for all dentists who deserve them everywhere. And because we seek to bring such conditions to pass by the only methods likely to achieve them, we are frowned upon as "unethical," "unrighteous," and other names not so agreeable to print.

Not long ago the editor wrote to a leading American dentist, a teacher in a dental college, and a fine man personally, and asked him to aid in determining the costs of the ordinary operations in dentistry by noting the time they required. He answered, "I am unable to do this because I am not in sympathy with the business building activities of your magazine."

Many of the contributors to THE DENTAL DIGEST are successful in both the professional and business sides of practice. They do the things they write about.

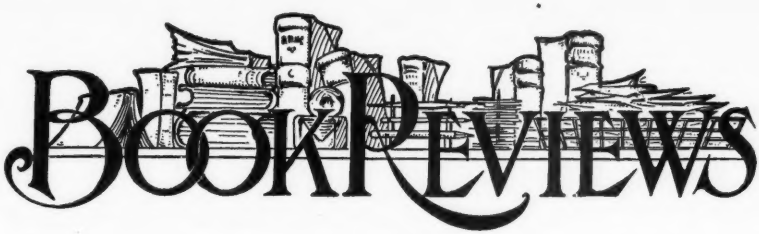
But always in this office, articles are read with an eye solely to their value to our readers. And an article bearing a famous name, but having no apparent value to the subscribers would be rejected far sooner than an article from the most obscure practitioner, which had even one thought of real value.

A SPEEDY AND ACCURATE METHOD FOR ADJUSTMENT OF A LOGAN CROWN

PREPARE the root in the usual way. Select a crown that will conform as nearly as possible to the diameter of the root, after the shape, shade, etc., have been considered. Grind the crown so as the labial aspect will fit the root, and the seam is beneath the gum.

Remove the crown. Adjust some warm inlay wax about the post, and the root end of the crown, preferably, Peck's wax, and press the crown to place. Remove, and trim to the desired shape. Invest and cast in the usual way. This can be finished out of the mouth and cemented on at the next sitting. The fit of the crown on the root and the post in the canal, is nearer perfect than can be obtained in any other way, and need not consume more than an hour's time. The result is pleasing as the metal need not show.

LEON C. PATTERSON, D.D.S.,
Saltillo, Mex., June 30, 1910.



PRIMER OF HYGIENE. By JOHN W. RITCHIE and JOSEPH S. CALDWELL. Illustrated by KARL HASSMANN and HERMANN HEYRE. World Book Company, Yonkers-on-Hudson, New York, 1910.

This little book, which is a companion to Ritchie's Primer of Sanitation, might with decided advantage form a part of each of our libraries. Few, indeed, are the books which might better grace the reception-room table of any dentist. For here, simply told, are some of the great secrets of health, strength and life. Any of us will gain information by reading it, for none of us are too wise on this subject. And the children and mothers who pick it up in their leisure moments can find profit on almost any page.

At the suggestion and with the aid of a number of dentists, there has been incorporated into the book a chapter on "The Care of the Teeth," which imparts valuable information in a simple and practicable manner.

Dentists who are interested in educating their clientele are advised to send forty cents to the publishers for a copy of this little book, and keep it on their reception-room tables.

XXTH CENTURY SHEET METAL WORKER. A Modern Treatise on Modern Sheet Metal Work. By H. E. OSBORNE. Published by The American Artisan, Chicago, 1910.

There has been sent to THE DENTAL DIGEST for review a little book having the above title and containing many apparently useful formulæ for working out either metal or paper patterns for figures which might be desired to be constructed. While these figures apply in most cases for work for roofers and tinners, it would be of considerable interest to those dentists who are of an investigating turn of mind and who, in the making of their various appliances, would be glad to work out, first on paper, the exact forms.

This little book sells for 60 cents with a pasteboard cover and $1.00 with a cloth cover, and for any who are desirous of working out patterns such as are referred to above it might prove very useful.

BOOK-KEEPING FOR DENTISTS. By FRANK WHITE. Published by Ballière, Tindall & Co., London, 1910.

We are in receipt of this little book on book-keeping which will no doubt be of much use to the dentist, as the information is given in plain language and in a specialized form. A list of books required is noted, specimen pages of the various books presented, and book-keeping opened and carried on for the space of one month. On page 11 will be found abbreviations used by dentists in making entries in the Patients' Ledger, the Day Book, and notes on Chart Cards. To the busy dentist who desires to keep his own accounts, this little volume will be of service.

AN ODE, DEDICATED TO THE DENTIST

By H. B. McCULLOUGH,* BROCKWAYVILLE, PA.

How sweet to call on the dentist gay,
And in gentle murmur hear him say,
"How many shall I pull to-day?"
With knife, and lance, and forceps true,
He deftly cuts our gums into,
And smiles to see us turning blue.
He twists and pulls with subtle glee
To see how torturous he can be
And with his tools all red with gore,
He sighs because his job is o'er.

The dentist's time will come at last,
For when his days on earth are past
Old Satan then will hold him fast
Upon a pitchfork in the blast,
Will grin to see him reek and swear
While on a fork he wiggles there.

* H. B. McCullough, is, by his letter head, an attorney at law. It may be that this was penned in a moment of passion, following some experience. Perhaps he never heard the following, which was written of a great lawyer:

When lawyer Bloom goes down to his doom
He will ride in a fiery chariot,
And sit in state on a red-hot plate
'Tween Satan and Judas Iscariot.

FIRST DISTRICT DENTAL SOCIETY
STATE OF NEW YORK

The regular monthly meeting of this Society will be held on Tuesday evening, October 11th, at 8 o'clock, in the New York Academy of Medicine, No. 17 West 43rd Street. Subject of paper, "A Contribution to the Art and Science of Dental Prosthesis," by J. Leon Williams, D.D.S., L.D.S., London, England.

The dental profession are cordially invited to this meeting.

SOCIETY AND OTHER NOTES

Officers of Societies are invited to make announcements here of meetings and other events of interest.

CONNECTICUT.

The Dental Commissioners of the State of Connecticut hereby give notice that they will meet at Hartford on Wednesday, Thursday, and Friday, November 16th 17th, and 18th, to examine applicants for license to practise dentistry.

ILLINOIS.

The Southern Illinois Dental Society will meet in Chester, Ill., October 25 and 26, 1910.

INDIANA.

The Twenty-second Annual Meeting of the Northern Indiana Dental Society will be held at South Bend, October 17 and 18, 1910.

MASSACHUSETTS.

A meeting of the Mass. Board of Registration in Dentistry will be held in Boston, October 26-27-28.

MICHIGAN.

The next meeting of the St. Joseph Valley Dental Society will be a joint one with the Kalamazoo Valley Dental Society, and will be held at Kalamazoo, October 25 and 26, 1910.

MINNESOTA.

The next regular meeting of the Minnesota State Board of Dental Examiners will be held in Minneapolis, November 15, 16, and 17, 1910.

MISSOURI.

The Northeast Missouri Dental Club will hold their next meeting at Palmyra, October 25 and 26, 1910.

NEW YORK.

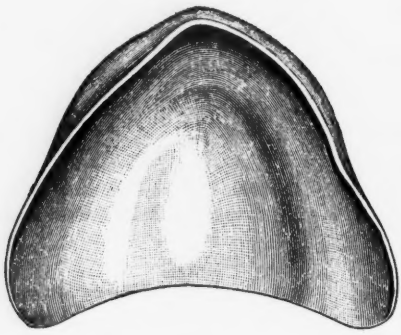
A union meeting of the Third and Fourth District Dental Societies of the State of New York will be held in Troy, October 21 and 22, 1910.

TEXAS.

The Northeast Texas Dental Association will hold its next quarterly meeting the second Tuesday in October at Winsboro.

CORRECTION

In the July, 1910, issue of The Dental Digest, page 429—Dr. L. P. Haskell's paper on "Abnormal Conditions of the Mouth"—Illustration 2, showing the depression over the cuspid eminence which occurs in 95 per cent of mouths, was unfortunately wrong. The one here presented is the correct illustration.



Ill. 2.

PATENTS

953,022. Dental-spray attachment for handpieces, Andrew F. Dollin and E. W. Couper, San Francisco, Cal.
953,042. Dental hot-air appliance, Walter Lamb, Hanover, Pa.
953,072. Tooth-swage, Theodore C. Trigger, St. Thomas, Ont., Canada.
953,702. Artificial tooth, Edward P. Off, Philadelphia, Pa.
955,320. Dentimeter, Agnes D. Cloud, New York, N. Y.
955,143. Dental lavatory, Thomas Dunbar, Chicago, Ill.
955,484. Electrical dental engine, John V. Trenaman, Newark, N. J.
956,218. Tooth regulator, Julius Steinbrugge, St. Louis, Mo.
957,032. Dental attachment, Wm. J. Brady, Jackson, Ohio.
956,843. Denture, Edward B. Crane, California, Me.
40,679. Design, barber's chair, Ernest E. Koken, St. Louis, Mo.
957,671. Dental cuspidor, Isaac M. Hair, Union, S. C.
957,563. Impression tray for dentistry, Mathew M. Kerr, Detroit, Mich.
957,258. Hydraulic barber's chair, Herold H. Ross, Chicago, Ill.
957,970. Barber's chair seat, Ernest E. Koken, St. Louis, Mo.
958,335. Toothpick, Joseph G. Strock, Trindle Spring, Pa.
957,913. Denture, Samuel G. Supplee, New York, N. Y.
958,048. Dental chair, Henry E. Weber, Canton, Ohio.

Copies of above patents may be obtained for fifteen cents each, by addressing John A. Saul, Solicitor of Patents, Fendall Building, Washington, D. C.